

**RESTORATION OF THE
WORLD'S CURRENCIES**

RESTORATION OF THE WORLD'S CURRENCIES

BY

R. A. LEHFELDT, D.Sc.

**PROFESSOR OF ECONOMICS IN THE UNIVERSITY
OF THE WITWATERSRAND, JOHANNESBURG**

LONDON

P. S. KING & SON, LTD.

**ORCHARD HOUSE, 2 & 4 GREAT SMITH STREET
WESTMINSTER**

38218

PREFACE

THIS book is intended as a study of an urgent problem of the day ; as such, it is hardly possible to give it the finish that might be devoted to a more leisurely study of past history. The monetary situation changes from month to month, so that an attempt to adapt the argument more nicely to the circumstances of the moment would be illusory.

The views of the experts consulted by the Genoa Conference are summarized in an appendix ; with the policy suggested by them I have in the main little disagreement, but whilst they seem to place the danger of the immediate future in a too rapid appreciation of gold, the arguments of the text point rather to renewed depreciation, and its associated evil of inflated currency. Hence, while the Genoa recommendations contemplate intentional regulation of credit, i.e. of the demand for gold, that seems to me a difficult and dangerous plan which should be reserved till the situation is better understood and more under control.

I have ventured to put in a word for the use of gold coins, which it is too much the fashion to condemn nowadays.

R. A. L.

CONTENTS

CHAP.	PAGE
I GENERAL PRINCIPLES	I
II METHODS	25
III LEVEL OF VALUE	63
IV PROCEDURE	91
V LONG-PERIOD EFFECTS	121

APPENDICES

RECOMMENDATIONS OF THE GENOA CONFERENCE	143
STATISTICAL TABLES	144

ANALYTICAL TABLE OF CONTENTS

CHAPTER I

GENERAL PRINCIPLES.—Point of view that of the world : but action has to be that of single nations. Special interests of gold-producing countries not irreconcilable. Principle of reform adoption of stable unit of value : need for this. Meaning of a stable unit : mode of measuring purchasing power : index numbers : wholesale and retail prices. At what level of value should monetary unit be stabilized ? Creditor and debtor interests. Creditor :—ownership of money : claims to fixed money payments : salaries : wages. Permanent and temporary interests. Debtor interests : national debts : external debts. Weight to be attached to interests. Case of excessively depreciated currency. Detailed remedy impracticable in cases of moderate depreciation. Changing value of money in the past : effect of a great war : adventitious gains : taxpayers' interest in lowering value of money : Mill's opinion. Illustration from history of British national debt. Settlement must be reasonably just : but justice alone is insufficient guide.

CHAPTER II

METHODS.—Two methods. Meaning of the gold standard : intrinsic value : stability. Fluctuations due to changes in supply : and in demand. Analogy of houses. Spontaneous and deliberate action of community. Gold standard before the war : mode of maintaining. Change in value then, (i) due to output, (ii) state of trade. Managed paper currency. Inconvertible paper : pre-war examples. Quantity theory of money : modifications in case of paper money : events of 1920-21. Theoretical possibility

ANALYTICAL TABLE OF CONTENTS

of steadyng prices: severe demand on Governments involved. Stability of foreign exchanges, effected by gold standard. Mechanism of regulation for paper money: not rapidly effective: imperfectly applicable to foreign exchange. Influences controlling rate of exchange (i) permanent, (ii) temporary: illustration from South Africa. Exchange fluctuations not prevented: importance of this. International paper currency impracticable. The two methods contrasted: possible combinations. Irving Fisher's plan: gold coinage not contemplated; delay in accustoming the world to a new idea. Arguments for and against gold coinage: countries with extremely depreciated paper: security in use of gold coins. Plan of regulating supply of (or demand for) gold. Syndicate of nations for this purpose. Danger of regulation on the side of demand. Regulation of supply distinguished from other forms of managed currency: policy suggested.

CHAPTER III

LEVEL OF VALUE.—Probable future value of gold: estimated in accordance with the quantity theory. Production since the war: expansion in the new world: falling off in Britain, and the continent: change does not account for price level. Money since the war. Classification of countries. Gold equivalent of currencies: sources of information: bank credit money. Illustration of Statistics. India and China: class "A" countries: class "B": class "C". "C" countries' money reduced in value. Total value of money related to total real wealth: Effect of poverty in "C" countries. Net increase in world's money. Cash and bank deposits: fluctuations in trade cycle. Inflation of deposits during war: statistics of bank deposits. Frequency of use of money and deposits. Relative increase in money and deposits. Device of an imaginary bank. Actual result as to currency: comparison with history of prices: effect of future trade fluctuations. Summary. Possible modifying circumstances. Policy for the immediate future.

CHAPTER IV

PROCEDURE.—Trade in gold. Accumulation of gold reserves. International indebtedness. Balance between raw produce and manufacture. Accumulation of gold in United States. Local currencies. Gold coinage. Weight of coins.

CHAPTER V

LONG PERIOD EFFECTS.—Proposal for slowly rising prices: criticism. Opposite suggestion. Limitations of index numbers.

Futility of pre-arranged fall or rise. Early history of prices. Stability of value of gold; comparison of past with probable future. Value determined by supply and demand. Slow adjustment in case of gold: uncommercial influences: prices in gold-mining districts. Diminishing return from mining: possibility of new discoveries. Demand for gold: for manufacture: for the Orient: increase in demand for monetary use. Rate of increase in demand: population: growth in individual wealth: total expected demand. Probable rise in value of gold. Suggested management of currency demand.

Restoration of the World's Currencies

CHAPTER I GENERAL PRINCIPLES

Point of view that of the world.

Monetary policy has such direct and considerable influence on every one's material well-being, that in opening a book on the subject one is inclined to ask at once, "From what point of view does the author write?" . . . "In whose interest?" The subject may, indeed, quite legitimately, be dealt with as it affects a nation, or an industry, or a class. Such treatment, however, cannot be convincing in the long run—is rather to be looked upon as material towards a fuller discussion. The monetary changes of the last few years have had astonishing effects on the position of classes, and even of nations, and nothing is more striking than the arbitrariness and unfairness with which monetary changes act. If the matter is to receive deliberate discussion, and an attempt be made to find the best way out of the present troubles, the result will not be satisfactory

2 RESTORATION OF THE WORLD'S CURRENCIES

unless the interests of the whole world be made the basis of the discussion. Single countries have, no doubt, interests which diverge in a good many ways, and within each country the varying interests of classes and industries will strive to lead national policy. But the affairs of different countries are so interwoven that public opinion is coming to see the need of looking beyond the interests of one's own country, in order to effect a settlement that will provide a stable foundation for prosperity even within the country. Certainly no treatment could claim to be scientific that did not consider the interests of the whole world, for no country can cut itself off from the rest of the world in monetary matters. Although each nation has its own problems, money, in the broad sense, is as international as knowledge.

But action has to be that of single nations.

That, of course, does not imply pure altruism in monetary policy. The circumstances of an individual country not only will influence its own decisions, but may rightly be expected to do so. Legislation within a country should be devised in such a way as to do the least injustice possible to any class, and so too an international legislator would be bound to pay as much attention as was practicable to the needs of each country, rather than disregard them in his effort after the good of the whole. As there is no international legislator, and each nation has to make laws for itself, a nation will rightly consider its own advantage, but should take the broadest views before deciding; by acting in such a

way as to promote a happy settlement for the world at large it will be likely to get a favourable reaction of other nations' policy on its own.

Special interests of gold-producing countries not irreconcilable.

Special mention may be made here of the interests of the country in which this book is being written, the Union of South Africa. South Africa is the largest gold producer in the world ; indeed, lately, its output of gold has been equal to that of all the other countries of the world put together. It is exceptionally dependent on this single industry, more so even than Chile on nitrate or Australia on sheep. This, of course, constitutes a very strong special interest, making it desirable, from the South African point of view that the value of gold should be high. But South Africa cannot, by itself, do much to attain that result. The influence it exerts in the world's trade is small, and while that influence will naturally be exercised in a sense favourable to gold mining, South Africa's own monetary policy has to be guided by the necessity for harmonious trade relations with the rest of the world. There is thus comparatively little opportunity for selfishness in monetary policy, and there is not enough self-interest involved to prevent South Africa from contributing in a broad-minded way to the discussion of the world's monetary needs. Moreover, there is reason to think that the right policy for the world is one not hostile to South Africa's special interests ; that gold is of too much use to the world for gold-mining to be discouraged, even if the encouragement is not

so whole-hearted as the gold producers themselves might wish.

Principle of reform, adoption of stable unit of value.

Putting aside sectional interests, then, we have to inquire what principle of monetary policy the world as a whole requires and what would make good money for the world ; on this there is, fortunately, a pretty general agreement. Money serves, chiefly, two purposes ; it acts as medium of exchange, but also, in doing so, it forms the standard of value. It is in the latter respect that the money of all countries has gone so deplorably wrong in the last few years. The world has discovered by direct experience how bad it is to have a standard that does not remain even approximately constant ; whether shrinking, as during the war and in the period immediately following the Armistice, or expanding in value as the pound sterling and some other units have done in the last two years, innumerable inconveniences follow. Every one is crying out for "stabilized money" ; money which shall be, as it professes to be, a standard of value. The present units are as inconvenient as a yard measure made of elastic.

In the times of peace before 1914, the monetary standard did not suffer these violent changes, but it was not quite constant ; economists had long observed and measured changes in its magnitude and the effects of these changes had begun to impress the public mind, so that they were taken account of occasionally, even in commerce and public affairs. But the changes in the value of the standard

amounted to a few per cent only, in gold-using countries such as England ; whereas the war has made us familiar with changes of hundreds per cent. In the pre-war time very large changes were known only in the currencies of South American republics and similar discredited states. It took some time, at the close of the war, when the cessation of fighting allowed people to think of other things, to realize that England, France and Germany had fallen into this category.

Need for this.

When most of the world used gold as its standard of value, and the fluctuations in the value of gold were a matter of a few per cent only, it was open to discussion whether a stationary, rising, or falling standard was the best ; and all these views had their advocates ; but no one contended that anything more than a very slow change was desirable ; the violent changes produced by the war would have been condemned universally. We need not, at present, consider the arguments that have been put forward in favour of a slowly rising or slowly falling standard of value, though such refinements may have to be considered later. At present we are only concerned with the paramount need for a standard freed from the violent fluctuations of the last few years, that is for money of approximately constant value, or which will buy an approximately constant amount of merchandise or labour. The merchant needs this in order that his transactions may be legitimate commerce, and not gambling ; the manufacturer needs it in order to take on

6 RESTORATION OF THE WORLD'S CURRENCIES

contracts, and feel sure of being able to carry them out ; statesmen that they may be able to balance the budget, and know what reforms the country can afford to undertake ; workmen and private persons that they may know how far their incomes will go ; capitalists that they may lay out money for the future, and have some reasonable confidence as to what to expect.

Meaning of a stable unit.

When one speaks of a monetary standard that should remain constant, the meaning is, of course, that it should buy a constant amount of other things. True, these things may themselves vary in value ; wheat may become more or less costly on account of a bad or a good harvest, a metal may become dearer because the ore from which it is prepared is becoming scarce, or cheaper because an improved process for extracting it is invented : new appliances, such as sewing machines or bicycles, are cheapened when the public becomes familiarized with them, and so the demand is largely increased : the labour of a particular class of workpeople rises in value if they can establish a superior social position for themselves. That such changes as these are happening all the time, is enough to show that absolute constancy in the standard of value, or in the measurement of it, such as the constancy of a standard of length, is not to be thought of.

Mode of measuring purchasing power.

Nevertheless, there is a definite meaning to be attached to the phrase "constancy of purchasing

power," and there is a definite means of measuring changes in the monetary standard. For if instead of thinking of the price of one thing, such as wheat, we take an average of many prices, fortuitous influences will be largely eliminated. It is in that way that index numbers of prices are prepared.

Index numbers.

One of the best known index numbers—that of Sauerbeck, now kept up to date by the *Statist* newspaper—is based on the prices in the London wholesale markets of some forty-five articles, either foodstuffs, or raw materials of manufacture. The price of each is expressed as a percentage of the price at a certain chosen time (the average of the decade 1867-77) and the mean of all the percentages constitutes Sauerbeck's index. It represents, therefore the amount of money needed to purchase a given amount of things in general—at least, so far as the whole mass of commodities is fairly represented by Sauerbeck's list. For example, the statement that, just before the war, the index was 85 meant that £85 went as far then in buying wheat, maize, beef, copper, linseed oil, raw wool, and forty other articles, as £100 went in 1867-77.

Wholesale and retail prices.

At first sight it may be thought that such information is of little interest to the ordinary purchaser in the retail shops; and certainly an index number so constructed must not be used blindly as a guide to the value of money. But the choice of commodities from which to derive an index is on the whole sound.

8 RESTORATION OF THE WORLD'S CURRENCIES

We cannot follow here the elaborate discussions of this matter which have been pursued in the technical publications of economic science ; we may, however, trust to the experience which shows that other prices do, on the whole, conform to the prices of standard raw materials in the wholesale market. In considering the application of index numbers to our everyday life, the most important point to be noted is that changes in retail prices tend to lag behind wholesale prices. Thus, the extraordinary rise caused by the war showed its culmination in the (English) wholesale index in April, 1920. Retail prices in England had not then risen so much as wholesale ; they continued to rise for about six months longer. In falling also they have lagged behind, so that now the retail index is higher than the wholesale index. If, however, in a year or two wholesale prices settle down to a steady level, it is probable that retail prices too will, after an interval, settle to a level bearing much the same proportion to pre-war prices.

Without arguing the matter in too much detail we may admit that changes in the value of money can be measured with accuracy enough to be useful. It is, therefore, possible to judge when a currency satisfies the condition of constancy of value, at least in a way that will do for practical purposes.

At what level of value should monetary unit be stabilized ?

If, then, the purchasing power of money can be measured, and it is a matter of public policy to keep its value stable, we are at once faced with the

question of the level at which it should be stabilized. The aim of stability cannot be accomplished without the co-operation of governments, or indeed except under the leadership of governmental action. The currency of a country is principally a matter of state authority, although the initiative of banks must be borne in mind also ; but besides the influence that governments must have in virtue of their authority, they exercise an influence through their own financial transactions, and these have, of late, been on such a scale as to affect the currency to an important extent—often in ways that were not intended. Even if a government had no intentions except to leave currency matters alone, trusting to the spontaneous action of trade and industry, still its own operations in meeting expenditure by taxes and loans would be far too important to leave out of account. It is, therefore, necessary to face the question of fixing the level at which it is desired to stabilize the value of a national currency.

At this point we find ourselves in the midst of the difficulties of the subject. It is to the general interest that the value of currency should be fixed ; the interests on the opposite side—those of persons who make profits by speculation in currency or in the produce markets—are so clearly opposed to the welfare of the whole that we may safely ignore them. But when it comes to deciding whether the level should be high or low, the legitimate interests are so divided that a case can be made out on both sides, and our judgment is seriously taxed to weigh the different arguments,

10 RESTORATION OF THE WORLD'S CURRENCIES

Creditor and debtor interests.

Broadly speaking, a high value for currency favours those who have claims to money, low value those who have responsibilities to pay money. It will sometimes be convenient to describe these as the creditor and debtor classes, but those designations are really too narrow and consequently misleading, unless one bears in mind the precise significance, which must be brought out by illustrations. Thus a salaried employee, on a monthly agreement, is not, strictly speaking, a creditor except for his salary up to the end of the following month, when his employer is entitled to discharge him—an insignificant amount; but in practice most such employees can look forward to security of tenure for years, and have therefore a reasonable expectation with regard to a much larger amount of money. Accordingly, their interest that money should have a high purchasing power extends much beyond their legal rights; on this understanding they may be grouped with the creditor classes.

Creditor.

The next step, then, is to make a list of these creditor and debtor interests with a view to holding the balance fairly between them. On the creditor side we may distinguish the following:—

Ownership of money.

(a) Persons whose possessions consist mainly of actual money. Individuals in this class are few, for if a man possesses only a few pounds, that does not really constitute his wealth; his true wealth

must lie in some capacity to earn more, otherwise he would soon starve. On the other hand, if a man owns a large quantity of money, he is almost certain to invest the bulk of it. But in this class we must include bankers, who are dealers in money, and consequently have to hold large stocks of it. To that extent the interest of banks is on the side of high value for money, and banks are very influential in the modern world. But banks owe as well as own money, and not only that, for they create currency by their action, so that their case is exceptionally complex.

Claims to fixed money payments.

(b) Persons entitled to a fixed money payment in permanence, for life, or for a long period. This includes those in receipt of pensions and annuities, owners of fixed rent charges, lessors of land and houses on long leases, holders of long date bonds and debentures. They are unable by any manipulation of their property to increase its annual value in money, so that their interests are entirely on the side of money having a high value, except in some cases for the remote prospect of a lease falling in and being renewed at a higher rental.

(c) Investors in fixed interest securities in general, holders of mortgage bonds, short-dated debentures, etc. The position of this class only differs from the last in that they are usually entitled to repayment of their capital at a fixed date, after which they may choose a new use for it if they wish. The nearness of that possibility may modify their views as to the advantage of low prices in the immediate future.

Salaries.

(d) Salaried persons with some security of tenure. They usually find it difficult to secure a satisfactory adjustment of salary when prices are rising but are also able to offer considerable resistance to reduction when prices are falling. They therefore find their interests to lie on the same side as the recipients of fixed incomes, only less rigidly.

Wages.

(e) Wage earners. Adjustment of wages, both upward and downward, is made more easily than that of salaries ; but there is a good deal of resistance, so that it suits the wage-earner for prices to fall. Traditionally, this has been their attitude, for in the past wages were less easily adapted to new conditions than they are now. If wages could be based on a sliding scale to vary precisely according to the value of money, it would be indifferent to the wage-earner whether prices were high or low, but such accuracy of adjustment is hardly attainable.

Permanent and temporary interests.

We are not, however, concerned so much with the effects of rising or falling prices, as with the effects of establishing them at a high or low level ; the interests of salaried and wage-earning classes being essentially temporary, in the long run salaries and wages can be adjusted to a new value of money ; hence they are not so deeply concerned as the earlier groups. Capitalists and investors sell the product of past labour, crystallized into the form of money ; but the wealth of the salaried and wage-earning

people lies chiefly in the future, and the future is plastic.

Debtor interests.

On the debtor side a complementary list can be made. That is, there are those who have incurred a legal liability for money payments spread over periods which may run into many years ; and there are employers who, though able to adjust their payments to some extent according to the value of money, yet have to face a serious resistance to reduction of the wage bill when money becomes more valuable ; but, in the opposite event, are able to take advantage of a rise in prices for some time after it occurs. These classes find their interest in a low level of value for money, and again their interest as debtors is more permanent than their interest as employers.

It is to be noted that in modern society the debtor class consists almost exclusively of business men, and so includes the richest members of the community ; not that they are all rich, of course. Thus among those who stand to gain when money becomes less valuable, through their fixed charges becoming less burdensome, are farmers who hold their ground on lease at a fixed rental ; lessees of houses, some of whom, of late, have become rich owing to the greatly enhanced price of house accommodation—they sublet and underlet their properties at rents out of proportion to the rent they themselves pay ; traders and manufacturers, who are normally in debt to the banks ; and shareholders in companies whose liabilities for debenture interest

absorb so much smaller a part of the profits, that the dividend paid on the ordinary shares can be largely increased.

National debts.

Besides the vast tissue of mutual indebtedness in the working of present-day industry, there is the equally modern phenomenon of national debts. These have been incurred partly to buy or construct valuable public utilities, such as railways and waterworks, but unfortunately the bulk of national indebtedness is only a burden left by war-making.

In the case of the richer nations the debt is nearly all "internal," i.e. borrowed from members of the nation itself. Thus, all the people of a country are—through the intermediary of the government—indebted to some of their number. In Britain some seven thousand millions of debt means an average of seven hundred pounds a family, the actual burden of interest, at 5 per cent, averages some £55 per annum, but is distributed according to the taxable capacity of the families. Many families receive more in interest than they pay in taxation towards the cost of the loan; in some cases the two items about balance, while in a considerable majority, the holding of Government securities being small or nothing, the family is interested in the matter only on account of the taxes that have to be paid. This distribution of interests is identical with that between capitalists and business men; the payment, whether for interest or redemption of capital is more valuable to creditor, and more burdensome to debtor,

when money is valuable, i.e. when prices are low.

On the side of capital no distinction need be made between holdings of Government securities and loans on debenture to companies ; indeed individual capitalists often sell the one and buy the other with the proceeds. But on the debtor side the liability to taxation to pay interest on war debt is different in incidence from the claims previously considered, for it is a permanent liability that cannot be adjusted to suit the value of money, and yet it is not restricted to a certain class but spread over the whole community of taxpayers.

External debts.

"External" national debt, as well as foreign holdings of industrial securities, are on a large scale, and so form a very important interest between nations : but they are affected by currency in a peculiar way. Nearly all such debts are contracted in the lender's currency, hence variations in value of the borrower's currency are of no consequence ; the same amount of real value has to be paid away, if the borrower is not to fail of his obligation, and the existence of foreign debt is not a motive for either appreciation or depreciation of currency. But the holding of foreign bonds payable in the money of the creditor nation will constitute for the creditor a motive in favour of its money being at a high level of value. A nation can control only its own currency, hence the anomalous result that while the creditor nation finds its interest on the side of high currency value, the debtor nation does not show the contrary interest.

Weight to be attached to interests.

So far we have only catalogued the interests involved without asking what weight justice would attribute to each. It is clear that the most important matter is to adjust fairly the burden of debts already incurred ; and we may assume, at least to start with, that justice would be done if each debtor were required to pay back an amount, not of money but of value equal to what he had received. To take an extreme instance in illustration, a loan of 10,000 marks made before the war cannot justly be repaid by means of 10,000 paper marks of the present day ; very many more paper marks are needed to buy the goods or services that the lender might have bought with his money at the date when he forewent that satisfaction in order to make the loan. Legally, however, such a claim does not hold ; indeed, it would be impracticable for the courts to assume the function of correcting the variations of a national currency.

Case of excessively depreciated currency.

When the depreciation of currency is so extreme it would be reasonable to attempt some discrimination as to the magnitude of long-standing debts, since the loss is serious and even overwhelming ; indeed, the socialist governments of certain countries have been accused of deliberately depreciating their currency, as the easiest method of dispossessing the capitalist classes. But the restoration that might be effected in this way is very limited in extent. A bank-note is an acknowledgment of debt on the part of a bank ; but it passes from hand to hand, so

that when inflation occurs each holder accepts a portion of the loss and hands the note on to some one else. Nothing would be gained by attempting to discriminate between the values of notes issued by the same bank at different stages of the inflation, for they are inextricably mixed.

In the case of identifiable obligations, such as long-dated debenture bonds, something might be attempted, though the justice aimed at would be seriously interfered with by transfers that had taken place since the depreciation of currency began. Where a bond-holder could prove having held it for a long period during which serious depreciation had taken place, he ought certainly to be allowed an increase in its nominal value, if the depreciation is accepted and made permanent ; and perhaps bank deposits might to some extent be dealt with in the same way, though of course bank deposits and bank loans would have to be dealt with together. Most other cases would have to be left alone.

Detailed remedy impracticable in cases of moderate depreciation.

It is clear that such measures for increasing the nominal amount of debts in order to compensate for a reduction in the standard of money are so difficult that it would not be worth while attempting them unless the reduction of standard is very great, e.g. in the United States three dollars are needed to buy what could be bought for two, before the war ; this change is too small to justify the confusion that would result from an attempt to remedy it. Indeed, changes in the value of money as large as that have

occurred in peace-time, only more slowly, and are accepted as part of the risks of ordinary commercial life.

This is not to say that such risks ought to be accepted without an attempt at amelioration ; on the contrary, it should be the aim of monetary policy to provide a more stable standard. But while steps in that direction may, and should, be taken with regard to the future, it is not worth while attempting to readjust past contracts, unless the injustice is serious, and the circumstances do not make practical measures too difficult. Of all past contracts national debts are by far the largest and they need special consideration, even though they are usually contracts between a state and its own citizens.

Changing value of money in the past.

The changes in the value of money that have occurred in the past have been due mainly to the relative abundance or scarcity of gold, and have therefore come about slowly, according as the discovery of a highly productive mine-field gradually increases the world's stock of precious metal, or the natural exhaustion of the mines leaves the supply inadequate to meet the constantly increasing needs of commerce. The slowness of these changes has caused them to be generally overlooked ; no attempt has been made to allow for them in contracts, or indeed even suggested, except by a few economic theorists, whose ideas have been too far in advance of the time to produce any immediate effect. The changes were none the less operative, of course, so that a Government borrowing ten millions to

construct a railway, let us say, early in 1894, on twenty year bonds, coming to repay the loan early in 1914, would fulfil its obligation with the same amount of money, though the purchasing power of that money, in railways or other things, was only as much as eight millions at the date of borrowing. Conversely, if the loan had been made in 1873 to be repaid in 1893, money increased so much in value in the interval that the Government, to fulfil its contract would have had to return 50 per cent more value than it received. These changes might have been compensated if the lender of 1873 had had to accept a very low rate of interest, while the lender of 1894 had been rewarded with a very high rate; but this compensation did not happen, because the changes in price level were not foreseen.

Effect of a great war.

There is, however, one instance in which no subtle economic analysis is needed to foretell a change in the value of money. During a great war prices always rise so much that a subsequent fall is pretty certain. Governments borrowing at such times—and the bulk of national debts have been incurred in war time—not only have to pay a high rate of interest, but are sure to get poor value for the money they borrow. The former disadvantage is corrected after a number of years when the Government's credit has improved again (e.g. France borrowed at 5 per cent during the war of 1870-71, but when the loans expired they were renewed at 3 per cent), but the effect due to the low value of money during war-time remains, whether the loan is repaid or the

interest is paid indefinitely, so long as the purchasing power of money remains higher than it did in the war.

Adventitious gains.

True, a person who at the beginning of war lends the Government money that he has on hand from previous saving is not getting this adventitious gain ; but most war loans are in effect, though not in form, the supply of goods on credit. A manufacturer supplies the Government with war stores, and is paid out of the proceeds of a loan to which he and others in the same situation subscribe, and as the war proceeds it becomes more and more the case that the subscribers to war loans are the persons who are being paid for goods and services by the Government.

Taxpayers' interest in lowering value of money.

Accordingly, it is contended that any considerable increase in the value of money after the war is over throws an excessive burden on taxpayers, to repay, or pay interest to, the national creditors. If the level of value is within the power of the state to control, the level should be kept low. But to keep the value of money lower than the ordinary circumstances of trade would make it a deliberate inflation of currency ; to attempt this for the reason just given has been regarded as a breach of faith.

Mill's opinion.

J. S. Mill¹ states this view very strongly. Referring to the Napoleonic wars, he states that " if an account

¹ *Principles of Political Economy*, Book III, Chap. 13, Sec. 6.

had been made out in 1819 of what the fundholders had gained and lost by the variation of the paper currency from its standard, they would have been found as a body to be losers," and then goes on to argue that even if that were not so, even if "we were now paying the interest on this debt in a currency 50 or even a 100 per cent more valuable than that in which it was contracted," it would still be only just. If it had been "avowed that after borrowing the money the standard at which it was commuted might be permanently lowered to any extent to which the collective wisdom of a legislature of borrowers might seem fit, who can say what rate of interest would have been a sufficient inducement to persons of common sense to risk their savings in such an adventure ? "

This is putting the case in an extreme manner, and tends, perhaps, to protect the lender from some of the chances of history that may fairly fall upon him ; but regarded as warning of the perils of a currency exposed to legislative interference it deserves the attention of every one, in these times of abuse of paper money.

Illustration from history of British national debt.

We shall have to recur to this matter, after getting closer to the practical problem of how stabilization is to be effected, but meanwhile it may help to make the problem clearer if we set out the actual facts in the case of the British debt, which, if it cannot be described as typical, since the history of each belligerent differed from the others, is at least an interesting case. The British debt

was incurred, approximately as shown in the table below¹:

	Debt incurred.	Value of money.	Real value obtained.	
Before the war	7	100	7	The debt is expressed in hundreds of millions sterling.
During 1914-15	5	90	4·5	
1915-16	10	78	7·8	
1916-17	19	66	12·5	
1917-18	19	56	10·7	
1918-19	15	48	7·2	
1919-20	4	43	1·7	
	79		51·4	$51\cdot4 \div 79 = 65$ per cent.

The third column gives the purchasing power of money in the year considered (derived from Sauerbeck's index numbers, taking the purchasing power in the period just before the war as 100, and ignoring the details of the history of the debt before that time). The fourth column is got by multiplying the two preceding together, e.g. in 1915-16 although £1,000,000,000 was borrowed, it only bought goods whose pre-war value was 78 per cent of this, or £780,000,000.

The total shows that the £7,900,000,000 borrowed bought £5,140,000,000 worth of goods at the prices of 1913. So if the eventual value of British currency is 65 per cent of what it was before the war, the state would in the long run repay about the same value as it received.

But even if Mill's argument is not accepted, the

¹ *Statesman's Year Book*, 1921, p. 49.

justice done by a suitable setting of the level of money must still be regarded as very rough : some creditors would receive less than justice, some more, and it would be quite out of the question to be fair to every one, since war loans of all descriptions have changed hands since they were subscribed for. In fact as regards all these smaller details, both creditors and debtors must accept the chances of fortune.

Settlement must be reasonably just.

It is not to be expected that a permanent settlement should be found, affording reasonable satisfaction, unless the just claims of these classes receive consideration. Arbitrary transfers of wealth brought about by fluctuations in the monetary standard leave a rankling sense of injustice behind them, whether they be destruction of savings or an unduly heavy burden of taxation, or hindrance of business enterprise, or wages inadequate to the cost of living. Contentment cannot be reached without some attempt to alleviate these injustices ; but some of them are more permanent than others, and in particular the level of wages is not very important. Not that adequate wages are unimportant—they are the interest that most vitally affects the whole nation ; but the actual level of money wages can be adjusted more easily than the other factors. For this reason we cannot agree with the conclusion of Prof. Cassel¹ that the right plan is to accept the current level of wages, so as to avoid the inconvenience of disturbing them, except so far as this is inevitable on account of some wages being dis-

¹ Cassel, *The World's Monetary Problems*, p. 137 (London, 1921).

24 RESTORATION OF THE WORLD'S CURRENCIES

proportionately high. He continues "the general level at which nominal wages should be stabilized having been agreed upon in this manner, the stable level of wholesale prices is the level at which cost *of production is covered." This seems to be based upon one of the least important of the arguments, to the neglect of the others.

But justice alone is insufficient guide.

But justice, even if it could be effected more thoroughly than is in fact possible, will not alone provide a solution. We have to consider the methods by which stabilization of currency is possible, and the practicability of carrying them out.

CHAPTER II

METHODS

Two methods.

There are only two ways of restoring stable currency : restoration of the gold standard, or intentional management of a paper currency. It is true that some combination of these or compromise between them may be possible and that to a certain extent the advantages of each may be combined : but for a clear understanding of the problem it will be well to consider each plan in its purity first. Both systems are well known historically ; the gold standard, without any attempt at deliberate control, was in use among the leading commercial nations before the war ; while a currency of inconvertible paper had been in use for decades in various countries, and although it had not a good name this disrepute was due, not so much to inherent qualities as to association with bad state finance. And actually there were countries using inconvertible paper whose financial standing was sound, and whose legislatures acted with at least an attempt at honest policy.

Meaning of the gold standard.

The gold standard consists in defining the unit of value as that of a fixed weight of gold, and requiring

by law and custom that any other means of payment shall be freely exchangeable for standard gold coins. Thus the United States dollar is the value of 1.50464 grammes of pure gold. Coins containing respectively five and ten times that weight are current in large numbers in the States ; and anyone possessing a Treasury note or bank-note, or having a current deposit at a bank, is entitled to demand from the Treasury or bank payment in such coins. Moreover, for the true establishment of the gold standard, not only law but custom is needed : not only must the legal right exist, but there must be no practical hindrance to exercising it. For instance, the national bank of the country must not look askance at a person demanding gold for its notes, so that traders would hesitate to ask for it when they need it. Further, there is an important condition which was overlooked during the long period of peace and comparative prosperity, but which has become painfully clear of late ; the recipient of the gold coins (or bullion) must be at liberty to do what he likes with them—to melt them down or export them if he chooses.

Intrinsic value of standard.

The gold standard is, of course, but one example of a money based on some article of intrinsic value ; silver, cowrie shells and many other things have been used in the past. None except silver is of any importance now ; it is still used as standard metal in China and some adjoining countries. The same considerations are applicable to it as to gold ; but there is no practical question of restoring it in Western Europe.

The essential character of the gold standard lies in the intrinsic value of the metal. Value is not conferred upon it by the decree of a government : it is inherent in the same way as the value of any other commodity. This, of course, is not to say that the value is a natural phenomenon independent of human efforts and wishes : the value—in the economic sense—is created by the interaction of human desire for it and the effort needed to supply it. Accordingly, value can be raised or lowered by influences, both material and psychological, which affect those conditions, and this is true of gold, as of anything else. But even the psychological conditions regulating values are tenacious and of considerable stability, while the material conditions, such as the existence of mines and the methods necessary for working them, cannot be easily or rapidly changed.

Stability of intrinsic value.

The value of gold therefore is not unalterable, but has a stability that paper money cannot possess. The demand for it is based on several deeply rooted causes. In the first place, it has been treasured as an ornament for so many thousand years that it is hardly possible to imagine a revolution in taste great enough to dispossess it. Secondly, it is a very useful material for a number of industrial purposes, for which a substitute can hardly be found. Thirdly, it is associated in men's minds with the idea of a sound and trustworthy currency, so that nations suffering from a debauch of paper money, look to it for their future safety, and the commercial classes

cling to it even more than before the war. Despite recent experiences that have demonstrated the mutability of its value, it is probably true that the prestige of gold in the world at large is higher than before, so disastrous has the use of paper substitutes been.

Fluctuations due to changes in supply.

During the past century the fluctuations in value have been measured with fair accuracy by the method of index numbers. Between the time when the disturbance due to the Napoleonic wars had subsided—say about 1830—and 1914, the lowest value of gold (highest level of price) was reached in 1839, and about the same level in 1873: the highest value in 1896; and the highest value was a little less than double the lowest.¹ These comparatively slow changes were caused mainly by the supply of new gold not keeping pace with the growth of commerce: sometimes for a decade or two the supply was excessive, at other times insufficient. For instance, the highest value occurred just before the stream of new gold from the Witwatersrand had become large enough to overtake the needs of the world's trade: previous to that discovery the output of the known mine fields had been falling off, and gold was becoming relatively scarce and valuable.

And in demand.

The change that occurred during the war was not from the side of supply, which went on much as before, but from that of demand, which fell off

¹ Layton, *Introduction to the Study of Prices*, p. 150.

suddenly. The industrial demand was stopped in the belligerent countries, as being wasteful, and unpatriotic : and even some gold ornaments were melted down and devoted to monetary uses. The circulation of gold coins, especially in England, France and Germany, ceased, paper money being adopted instead, and coins became part of the banking reserves. Even international transactions in gold were largely reduced in importance owing to the interruption in intercourse, and the embargo placed on gold exports by various governments. All these circumstances meant that the demand for gold was much less than in peace time ; the United States was the only large country that kept its currency on a gold basis. If it had not done so the value of gold would, no doubt, have fallen even more than it did. Actually an ounce of gold came to buy, in America, only 40 per cent of the goods it was worth before the war. The minimum was reached in the spring of 1920, when—one need hardly remind the reader—though the war was over the difficulties left behind by it were as acute as ever. A fall in prices set in at that date and by the end of 1921 gold had recovered to about 70 per cent of its pre-war purchasing power.

Analogy of houses.

This very much abbreviated historical sketch may serve to bring out the most important influences regulating value. Gold is a durable commodity of which the annual production is but a small fraction of the stock in existence. In these respects it is similar to houses. Now suppose that in a city the

demand for houses suddenly falls off, owing to half of the population having gone to the wars, or being killed by an epidemic. The value of houses would drop severely, so that it would not pay to build any new ones ; but if the city recovers in course of time the price of houses will rise slowly and in the end be regulated by the cost of new building. So it is with gold : its value at any moment depends on the interaction of demand and supply, but while a change in demand produces its effects immediately, the influence of cost of production is slow. In the long run, however, the value will have to be sufficient to encourage new production. As it is, the drop in the value of gold due to the war has had the effect of making many mines unpayable, and reducing the annual output by one-third ; many of the mines that are still worked are making no profits and have a precarious future.

Spontaneous and deliberate action of community.

In applying these considerations to study the monetary use of gold, it is important to distinguish between the spontaneous and the deliberate action of the community. The influences of demand and supply are usually spontaneous, in the sense that they arise out of the actions of thousands, or even millions, of independent individuals. When that is the case they are like natural phenomena ; they follow laws that can be worked out by observation and reasoning, and though the laws are essentially statistical, i.e. represent average activities, they are none the less dependable. Thus the smoothness of a lawn is a statistical result due to the average

character of thousands of grass plants, though when one examines them individually, great differences may be apparent. Again, an insurance company is able to proceed securely with the business of granting annuities, despite the fact that one annuitant may die young and another live to be a hundred—it is only concerned with a statistical average.

Now the economic activities of a nation are of this character, except in so far as the nation forms itself into large units, each with a single will. The largest of these is the state: through it the nation expresses its deliberate wishes, and the economic action of the state is large enough to upset to a considerable extent the conclusions that may be drawn as to the spontaneous action of the community. Smaller units, such as a great bank or even a private industrial syndicate, may exert an influence too large to be merged in the statistical mass.

Before the war most branches of economic activity were nearly free from such influences, but the war occasioned a vast increase in the work of the state: so that, for instance, currency is now mainly regulated by the deliberate action of the community (in issuing paper money, in making government loans, etc.), whereas before the war it was mainly regulated by spontaneous action; although even then the deliberate policy of such an institution as the Bank of England was not without effect. But the policy of a government cannot be foretold with anything like as much certainty as the average behaviour of the commercial community. Hence even the value of gold must now be considered as exposed to influences which, as they are "deliberate,"

may also be described as "arbitrary" or "unforeseeable."

Gold standard before the war.

Since the leading advantage of the gold standard lies in its relative freedom from the arbitrary action of governments, we may consider that the pure type is to be found where such interference is absent, and the value of the standard is left entirely to the spontaneous action of demand and supply. The policy of the leading nations before the war supplies examples of this and we may choose England to study. The monetary unit of account, the pound sterling, was then defined by means of the weight of gold contained in the standard coin—the sovereign ; and the laws and customs of the country were such that any creditor, in England or out of it, could realize his claims to sterling in the form of sovereigns when, and to whatever extent, he pleased. Of course the actual means of payment consisted mainly of paper—cheques and bank-notes ; and as the claims for payment abroad might conceivably some time cause the exportation of all the gold in the country, and leave it with paper money and no means of keeping up its policy of convertibility, it was recognized as an important problem to " maintain the gold reserves."

Mode of maintaining.

The way in which this was done, by the Bank of England, with the co-operation of the other constituents of the London money market, may be read in all the books. The mechanism was ingenious and

its operation nearly perfect ; but the real reason why it worked so well was that there were always more debtors than creditors of England, so that if the latter drew out gold to an extent that appeared alarming, it was always possible to turn to the former to make up the deficiency. The gold in the country in 1910 was estimated at about £113,000,000 and no export demand that ever arose came near enough to using up this supply to constitute a threat to the convertibility of bank-notes ; at most it only caused some inconvenience in commercial circles, owing to a rise in the rate of discount and difficulty in obtaining advances.

In these circumstances the function of the Bank of England was rather to register the economic position, and to facilitate the action of the machinery, than to take an independent decision : the "Bank rate" was rather a recognition of what ordinary commercial causes had brought about than an attempt to control them. As for the Government, it paid its way, like any honest citizen, and took no part in the regulation of currency beyond the unconscious part that anyone plays who has money to receive and to pay ; moreover, the transactions of the Government, though large, were not overwhelmingly so—only of about the same magnitude as those of the railway companies taken collectively.

Change in gold value in those circumstances :

(1) due to output.

When this was the state of affairs in England and something like it prevailed through most of the civilized world the value of gold was determined,

practically, like that of any other commodity, by the spontaneous effects of demand and supply ; and then it suffered fluctuations such as those mentioned (p. 28) of considerable magnitude, but small compared with the violent changes of the last few years. It is of much importance to the argument to note that the changes occurring in the ordinary commercial regime of peace time are of two distinct types, due to different causes. There is the slow rise and fall due to scarcity or abundance of gold : this depends on accidents of mining discovery and of the progress of invention in treating gold ores. Naturally the changes are irregular, and no rule can be stated as to their extent or frequency ; but, as a matter of history, gold was becoming scarce (i.e. the yearly output was not enough to keep pace with the world's constantly increasing needs) in the 'thirties and 'forties of the last century : then the Californian and Australian discoveries produced an excessive output (i.e. enough to bring down the value of gold) for a quarter-century. This was succeeded by a quarter-century in which the mines began to show signs of giving out : and then by the new rush of gold from the Witwatersrand, Klondyke, and Western Australia, that again reversed the situation.

(2) Due to state of trade.

On the other hand, there are much more rapid changes produced by changes in the activity of trade ; these have during the last century been found to be markedly periodic, a "boom" and "slump" happening about once every ten years. Whether the periodicity is of psychological origin,

or due to some such cause as the influence of the sun on the crops, and also whether the periodicity will persist unchanged, is immaterial for our purpose. What is important is that changes in value from year to year due to the state of trade (i.e. from the side of the demand for gold) are to be expected : but that they are not very large, and that there is no reason why they should be cumulative in their effects. Studied by means of Sauerbeck's index number, analysed in such a way as to eliminate the effect of changes in the supply of gold, the difference between the maximum value of money (during the slump) and the minimum (during the boom) has not exceeded about 25 per cent, and has usually been about 15 per cent. These, it will be seen, are much smaller than the changes brought about more slowly, but in a cumulative manner, by the greater and smaller output of gold from the mines. If it should be decided to readopt the gold standard, for the sake of its natural stability in value, these two causes of imperfection must be considered separately.

In the previous chapter we concluded that certain considerations of justice must be attended to in settling the value to be attached to the monetary unit of a country : in the present chapter we have seen that the monetary unit that is defined by means of a gold coin is primarily determined by natural causes. We have to ask them whether these two conditions are compatible ? Could the gold standard be, in fact, restored without a failure of justice ? In order to answer these questions we must deal with figures expressing the actual situation. But first let us examine the alternative of a managed paper currency.

Managed paper currency.

Paper currencies have always been classified according as they are convertible into metallic money or not. The former kind is no doubt susceptible of management to a certain extent ; but as it involves the use of gold, and therefore of the gold standard, it is best looked upon as an aspect, or a modification of the system we have just considered. The advocates of "managed currency" usually mean paper which carries no promise of conversion into metallic money at all.

Inconvertible paper.

A few years ago it would have seemed strange to most readers that such a currency should exist : although inconvertible paper money was by no means unknown, the public of Western Europe and the United States if they thought of it at all, thought of it as money meant to be convertible, which had failed of its purpose. Nowadays we are familiar enough with inconvertible paper money as a fact ; for England, France and Germany and other countries too numerous to mention carry on their business with it. There are still some writers who derive its value from the nearness or remoteness of the prospect of its redemption in gold ; but it will not seem, to the public, a strange conception to regard paper money as having a value of its own, on account of the services it renders in doing business--a conception which has the imprimatur of orthodox economics. *Prima facie*, most people will think of a "Bradbury" as of value because one can buy things with it rather than because some time hence it will probably be

convertible into a sovereign. Not that this view should be accepted uncritically ; but it may serve as a starting-point, and we have to see whether it will stand analysis.

Pre-war example.

There were, in pre-war times, countries of excellent credit that for many years carried on all their internal commerce with paper that was *inconvertible* by law.—Chile is perhaps the best example. Chile had, undoubtedly, all the resources necessary to acquire a gold currency, and it must be put down to the deliberate choice of the nation that it did not do so. Whether the choice was wise or not is immaterial ; the currency fluctuated in its gold price, but never became worthless, or anything like it, during several decades. There was a party in the state that favoured introduction of the gold standard, it is true ; but one can hardly attribute the persistent value of the currency to the remote hope that this party might win a majority in Parliament. A country needs a certain supply of money to carry out its transactions and if the only available money is a certain type of note authorized by Government that note will have value : if there are few such notes the value will be relatively large : if many, the value will be smaller.

Quantity theory of money.

This is a rough expression of the “ quantity theory of money ” which has played so large a part in economics. It was stated accurately by Ricardo, a century ago, and if there are still a few writers who

do not accept it, that is really due to a misunderstanding of what the theory implies, attributable perhaps to a lack of care in exposition. In countries where gold is adopted as the standard of value, the slow but persistent changes in the supply of gold due to the varying productivity of the mines have their effect in corresponding changes of price level. The leading incidents as regards gold supply during the nineteenth century, noted above, were reflected in changes in the general level of prices which fell, on the whole, before 1848, rose thereafter for about two decades, fell again till 1896, and then rose again.

Modifications in case of paper money.

There are, however, two other ways in which currency can be adapted in amount to the needs of trade ; the first is the growth in the use of paper substitutes for gold. All along this influence has shown itself, but as it has been a steady and slow change (until the Great War) it has not obscured the relation between the gold supply, which comes in spurts, and prices. The other way is that currency is sometimes used more and sometimes less actively —an increased frequency in the use of money has the same effect as an increase in the amount of it. This is the chief influence observable in the course of those shorter oscillations due to periods of good and bad trade. When the business world is confident, money (including bank balances) is passed rapidly from hand to hand ; in times of depression the reverse is the case. The people are inclined to keep a larger balance at the bank partly as a precaution, partly because they hesitate as to the

employment of spare money, and partly because bankers insist on balances not being allowed to fall too low in proportion to the amount of business done.

Thus in the course of a trade cycle—of ten years or thereabouts—the total of money, including bank deposits, usually contracts during the period of depression and is inflated by new credits during the period of hopefulness: but these changes are accentuated by the less and greater frequency of use that occur at the same time. A proper statement of the quantity theory must take this into account.

Events of 1920–21.

For instance, prices in England dropped between the middle of 1920 and the end of 1921 to an enormous extent while the circulation of currency notes only fell by a few per cent, and the total of bank deposits showed slight fluctuations first one way and then the other. This has been regarded as a confutation of the quantity theory. But in the first place “deposits” in the English banks are not distinguished into current and fixed; but only the former can be drawn against by cheque, and so serve the purpose of money, and it can hardly be doubted that during that time of slump a good deal of current deposits were converted into fixed, so that the true total of currency (coin, notes and current deposits) would show a decided falling off. Secondly, the currency remaining was transferred from hand to hand less actively at the end of the period than at the beginning, and this would have the same effect in bringing down prices as the actual diminution of currency.

The facts are therefore in harmony with the quantity theory if correctly stated.

Theoretical possibility of steadyng prices.

This digression brings us back to the case of an inconvertible paper currency, the amount of which can be regulated at will by the issuing authority. The effect over a long period will be to make the level of prices depend on the quantity of paper (relatively to the size and productivity of the country) ; but, as we have just seen, temporary fluctuations of prices due to the varying activity of trade would not be excluded. The issuing authority then might with comparative ease keep the average level of prices steady by regulating the amount of paper in circulation ; but it would have a more difficult task if it proposed to meet every fluctuation in business confidence by a similar regulation, and the latter aim might fairly be omitted as of less importance.

Severe demand on governments involved.

But to say that currency can be kept to a steady standard of value in this way is, unhappily, not the same thing as to say that it will. All through the history of credit, governments have yielded to the temptation of issuing paper money in excess, regardless of the effect on the standard of value : and though banks have usually shown themselves sounder and more conservative, they necessarily yield to the pressure of governmental needs in times of national stress. It is indeed remarkable that just after the worst orgy of depreciated paper money ever known, writers should still be found advocating

a system of well-regulated paper as superior to the metallic standard. Thus Professor Cassel writes :—

“ The public announcement of a definite policy would in itself be a very wholesome measure, obliging the government and the issuing bank to an earnest and comprehensive consideration of the whole problem, and after that binding them morally to a stern fulfilment of the policy decided upon.”

But can any government be trusted to show that stern morality on which the whole system depends ? Cassel himself is quite alive to the danger of his suggestions, but, nevertheless, thinks that they can be carried out. One may admit that in times of peace the government of the more advanced and intelligent nations would not abuse a system of inconvertible paper money, though even that is admitting a good deal : but it is just such nations, with their good credit and developed resources, that could easily afford a gold standard, while nations such as those of Eastern Europe or South America would hardly succeed in establishing confidence in their policy even in peace time.

Stability of foreign exchanges.

There is, however, another objection to inconvertible paper of an entirely different character ; for we have not yet considered how it affects exchange between different countries. Paper-money issues, so far as the world has yet gone, have been purely national : it is indeed possible that an international currency may be established some time in the future, and this is a possibility that we must consider. But for the moment let us deal with

national moneys such as exist at the present time. In international transactions they have to be exchanged at such rates as the economic circumstances of the moment produce. If we are to have a truly stable monetary standard, fluctuations in foreign exchange, as well as in internal purchasing power, must be kept within narrow bounds.

Effect ed by gold standard.

It is well known how the gold standard operates : in pre-war times when both pounds sterling and francs were freely exchangeable for gold coins, and there was no restriction on dealing in gold, a London merchant who had a bill to pay in Paris, might, if he could not find a better way of paying, obtain sovereigns from his bank, send them to Paris, have them melted down and recoined into 20-franc pieces and use them to pay his debt. This process cost only a trifle, for freight, insurance and mint charges, so that the number of francs to be bought for one pound could never depart more than a little from that determined by the actual weight of the English and French coins, viz. $25\text{ f}.\text{22}\frac{1}{2}$. If it was not possible for the merchant to buy in the market French money at more than $25\text{ f}.\text{12}$ or thereabouts, it was actually cheaper to go through the process described (on the large scale, of course, and in practice, through the intermediation of exchange banks). Accordingly, when two nations are both using the gold standard, merchants know within 1 per cent how much it will cost them to buy goods in the other country : contrast this with the state of uncertainty and speculation existing at the present

time between England, France, Italy and the United States, not to choose any worse examples. The question is whether inconvertible paper money can attain the same reliability as a means of carrying on international commerce.

Mechanism of regulation for paper money.

The best answer to this question lies in considering the way in which a regulated paper currency would be operated. The aim being to keep prices steady—at least no other aim has been put forward at all clearly—it would be necessary to institute an official index number, somewhat on the lines of that of Sauerbeck for wholesale prices or that of the Department of Labour for retail ("cost of living"). The construction of this having been decided upon, and the working out placed in the hands of a scientific bureau, the number would be published from time to time; probably once a month like the two just quoted. When the index number rose, showing that the value of money was falling below the standard, instructions would be given to the authority responsible for issuing paper money to restrict the issue. How that is to be done, we need not for the moment inquire: we will assume that the mechanism for the purpose is effective. The mechanism, whatever it might be, would clearly be in close association with the banking system of the country; and as in the more progressive countries bank deposits form a more important means of payment than paper money, it would no doubt be necessary for the currency authority to advise the banks to act cautiously and withdraw credit rather

than extend it. We will assume that the banks willingly play their part in the scheme, and that no difficulty arises in this direction. Of course, if the index number fell below the standard the process would be precisely reversed.

Not rapidly effective.

Now such a plan, though probably quite effective, would take time to act. The index number according to which the decision was made would refer to prices already two or three weeks old, when published : and the changes in issue of paper money that followed would certainly have to be spread over some weeks. The influence on credit operations of banks would be largely a secondary one operating through the supply of paper money and so would show a somewhat longer delay. But as most mercantile transactions are based upon credit of a few months' duration, the tendencies of the market would probably continue for two or three months in one direction while the monetary check was being prepared to reverse the movement. The result would be a series of small oscillations about the standard of prices rather than continuous maintenance of the standard.

Imperfectly applicable to foreign exchange.

This fluctuation of price within a country would not be a serious evil in itself. Such changes are constantly happening now, and have done so during the existence of the metallic standard ; but so long as they are small in extent they are borne by merchants and dealers on the exchanges, and to a small

extent by manufacturers. Unless they accumulate in one direction and so create either an abnormal stimulus or a marked hindrance to the business man, they do not affect production and so are of no great importance to the wage-earning majority. But they do affect the foreign exchange market. That market is one of the most sensitive in existence, being moved from day to day by the most diverse influences and with the greatest rapidity. The slow-acting regulations of the monetary system would never be able to catch up with such movements : in the long run it would control them, and prevent their exceeding a certain range : but there would be inequalities of exchange amounting to several per cent and lasting as much as several months.

Influences controlling rate of exchange.

The rate of exchange between two countries is regulated by the demand which exists in each for the money of the other ; and that, in turn, is the expression of two influences.

(1) Permanent.

One, fundamental and permanent in character, is the level of prices in the two countries. If the prices of easily transportable goods, such as wheat, metals, raw wool and cotton, etc., in say, Italy, reckoned in lire, are and remain twice as high as they are in France reckoned in francs, then ultimately one franc must be worth two lire. Otherwise there would be a continuous process of buying all kinds of goods in the country where the money for them was more easily got, and selling in the other,

thus continuously heaping up a demand for the one currency uncompensated by any demand for the other. This principle is described as that of "purchasing power parity" between two moneys; to have put it in a clear light and emphasized its importance, is one of the great services rendered by Professor Cassel in the brilliantly lucid work from which we have already quoted, as well as in other writings.

(2) Temporary.

But there is another influence on foreign exchange: secondary indeed, and temporary, but which must not be ignored. This is the balance of trade between the two countries, the actual commitments as to imports and exports. The balance has to be met by purchase of the necessary currency of the other country, and at once: so that whatever the ultimate effect of purchasing power parity may be, the exchange market is necessarily affected by the immediate needs of merchants in settling their accounts. This is one reason of the sensitiveness of the foreign exchange market, and causes considerable temporary oscillations in rates.

On this point Cassel's exposition seems to be inadequate. He says¹ :—

"If trade between two countries is more hampered in one direction than in the other the value of the money of the country whose export is relatively more restricted will fall, in the other country, beneath the purchasing power parity," and seems to imply that if there are no artificial restrictions,

¹ Op. cit., p. 39.

"prohibition of exports . . . export duties, measures to keep up higher prices for foreigners than those of the inland market, etc.," such "abnormal deviation of exchange" will not occur. This, however, states the case too narrowly: purely trade influences, free from any government interference, are sufficient to produce the abnormality for quite a considerable time.

Illustration from South Africa.

This is admirably illustrated by an incident in the financial history of South Africa. During the war that country was unable to buy its accustomed supply of manufactures from Europe, while there was an extraordinary demand for the wool and other commodities that it exports. Consequently South Africa accumulated a considerable balance in its favour: and as trade is mostly with England, and exchange operations almost exclusively on London, this meant that large sums due to South Africa accumulated in the London offices of the exchange banks. After the Armistice and the resumption of manufacturing and trade in England the situation was rapidly reversed. Enormous imports into South Africa took place, and that country found itself under the obligation of making heavy payments in London. Now the currency of both England and South Africa is the pound sterling, but conversion into gold was suspended in both countries and the only legal obstruction at that time was the prohibition of the export of gold. But this did not apply to the output of the mines which were allowed to export their bullion to London and

sell it freely in the open market. The small amount of gold specie in South Africa (£10,000,000 or thereabouts) would have made no noteworthy difference if its export had been permitted. The actual cost of exchange was as follows (price in South Africa of a cable transfer for £10,000 on London):—

May	1, 1919	.	.	.	.	£10,031
Aug.	1, "	.	.	.	.	10,025
Dec.	10, "	.	.	.	.	10,000
Feb.	12, 1920	.	.	.	.	9,875
Mar.	8, "	.	.	.	.	9,600
April	6, "	.	.	.	.	9,400
May	1, "	.	.	.	.	9,250
June	15, "	.	.	.	.	9,400
July	17, "	.	.	.	.	9,800
July	20, "	.	.	.	.	10,000
Aug.	4, "	.	.	.	.	10,075
Sept.	1, "	.	.	.	.	10,125
Sept.	14, "	.	.	.	.	10,250
Oct.	5, "	.	.	.	.	10,325
Nov.	4, "	.	.	.	.	10,450
Nov.	30, "	.	.	.	.	10,550
Jan.	6, 1921	.	.	.	.	10,350
Jan.	31, "	.	.	.	.	10,200
Feb.	21, "	.	.	.	.	10,150
Mar.	5, "	.	.	.	.	10,100
May	16, ..	.	.	.	.	10,050

Foreign exchange fluctuations not prevented.

It may be granted that the circumstances were exceptional, but on the other hand the intimate political and commercial relations between the two countries probably keep the fluctuations of exchange smaller than between two countries that are entirely foreign to each other. Certainly the exchanges of Chile and Brazil on London have

suffered even greater ups and downs, and those at times when those countries were not actively inflating their currencies. It seems fairly proved that two currencies not both convertible into gold (or silver) are liable to fluctuations amounting to several per cent on account of the ordinary accidents of trade —among which a bad harvest is a common and important one. This behaviour is far inferior to the regulative action of the gold standard, which keeps exchanges for years together within a few tenths per cent of par.

Importance of this.

Moreover, this regulative property is of much more importance in foreign trade; in internal trade moderate fluctuations in the price of materials and manufactured goods are among the ordinary risks that every business man is prepared for, but foreign traders commonly work on a fairly close margin, so that a risk of some per cent in the cost of the currency needed for payment may make a transaction quite unpayable, and superimposed on the ordinary risks give an unduly speculative character to the whole business. When such speculative risks occur merchants, of course, protect themselves by charging higher profits in general, so that the cost of the uncertainty falls in the end on the public. Moreover, fluctuations in exchange are well known to produce very upsetting currents of capital between the two countries: floating balances are transferred for the sake of the profit on exchange quite regardless of the industrial needs they should supply.

International paper currency impracticable.

We can only conclude that regulated paper currencies, even if so honestly managed as to be satisfactory for internal use, would be notably inferior to the gold standard as a basis for international trade. Only one qualification need be made, and that is that an international paper money would be free from the objections just stated. But to establish an international currency would need not merely an international authority like the League of Nations, with financial resources such as the League does not possess, but would require control of all local currencies by the same authority. Without control the international currency would only make one more unit for exchange dealers to play with, and fluctuations of exchange would be as much in evidence as before. But a world in which the nations would submit to have their own currencies regulated by an authority at Geneva is too far away from the present time to be worth speculating about.

The two methods contrasted.**Possible combinations.**

It appears then that of the two methods by which stability of money value might be attempted, the automatic gold standard has the defect of not excluding slow changes of indefinite extent, while the managed paper standard might easily give rise to far more rapid and arbitrary changes, due to the strain it would impose on the trustworthiness of governments; and is also technically inferior in the matter of foreign exchange. It is, however, possible

that some combination of the two methods would eliminate these defects.

Irving Fisher's plan.

One such is the method proposed by Professor Irving Fisher¹ long before the war, to overcome the much smaller variations to which money, then on the gold standard, was exposed. He would make the monetary unit of a country convertible into gold, but not a fixed weight of gold ; on the contrary, the weight would be adjusted from time to time by a mechanism such as was suggested above to regulate inconvertible paper. The weight of gold representing the dollar or the pound would be adjusted so as to possess a constant value, i.e. to purchase a fixed amount of commodities. In this way the theoretical advantage of "managing" would be retained, but in addition gold would be used not as ultimate standard of value it is true, but as an intermediate standard of a tangible character. Gold would be available as a means of effecting foreign exchange : convertibility of local currencies should be maintained in much the same way as on the simple gold standard ; and the slow changes in the value of gold due to the varying productivity of mines would no longer be of any consequence, as they would not affect the standard of value.

This plan is not only ingenious, but has serious practical merits to recommend it. The precise form in which it could be worked out would differ somewhat according as it was adopted by one country only, or simultaneously by most or all of the

¹ *Stabilizing the Dollar* (New York, 1920).

world ; the index number used might, in the latter event, be determined separately by each nation, or might be entrusted to an international authority. But in any case each government would have to undertake the responsibility of maintaining its own currency according to the standard chosen, by buying and selling gold bullion ; for which purpose a reserve of gold would have to be maintained. This reserve would take the place of the reserves kept in the central banks.

Gold coinage not contemplated.

The local currency of any nation might consist exclusively of paper (with silver and copper for change) convertible, as explained, or it might consist partly of gold coins. Fisher at first suggested the latter, chiefly in order to meet the conservatism of countries in which gold coins were current ; but now that the war has destroyed that custom he advocates a pure paper circulation. Gold coins on his system would be tokens, as silver coins are now, for if a sovereign continued to contain 7·32 grammes of gold while the weight officially given in exchange for a pound sterling became greater than that, the sovereign would no longer be a standard coin in itself, but merely a token of one pound sterling. While if gold became more valuable so that the official rate was less than 7·32 grammes, sovereigns would be melted down and sold. As token coins they would no doubt function quite well ; but so would paper pound notes, which are cheaper, so there seems no motive for retaining the gold coins on Irving Fisher's system.

Delay in accustoming the world to a new idea.

There can be no doubt that the system would work and that it would confer great benefits on a world plagued with ill-regulated currencies ; it would, however, be necessary to convince the commercial and political classes of its merits. Mere conservatism should not be put forward as an argument, but it is permissible to claim that the simple gold standard being familiar to every one should be adopted as the means of reforming the present deplorable situation, and that if a system involving a principle new to the business world is to be introduced at all, its advocacy might be deferred in order not to delay the present remedy, the need for which is urgent. Whatever view may be taken on this point, however, the fact that an actual gold currency would be abandoned on Irving Fisher's plan constitutes a difference from the simple gold standard system, and makes it necessary to consider whether this is advantageous or the reverse.

Arguments for and against gold coinage.

To do without gold coins in circulation is economical. In the United Kingdom, before the war, to take an example, some £70,000,000 of gold was in use among the people ; to do away with that is equivalent to earning interest on this amount, or say at six per cent, equal to half a crown per head of the population per year. This is a measure of the economy. In the opposite scale is to be put the security that a gold circulation offers against undesirable manipulation of the currency. It may be granted at once that this would probably not be

effective in the crisis of a great war ; yet it is worth noting that the absence of gold circulation allowed the English currency to become depreciated without remark. If gold had been circulating alongside of paper, two different sets of prices would have sprung up, bringing home to every one that the paper pound was not worth as much as the sovereign, and this might have had some restraining influence on the extravagances of war finance.

Countries with extremely depreciated paper.

But in countries where the currency is badly depreciated, the use of coins of intrinsic value would be the simplest and most direct way of putting into the hands of the public means of payment not subject to political manipulation, and perhaps the only way. For Fisher's plan is, after all, a "managed currency." It means issue by government of certificates representing a certain intrinsic value, and so long as the issue was faithfully carried out the certificates would be of full value. But the author of the plan himself contemplates that the reserve of gold held against certificates might be reduced to 50 per cent. Is it not likely that a government in financial difficulties would soon find that it might be reduced to 25 per cent ? and then to 10 per cent ? and that soon afterwards the system would break down, and lead to inconvertible money and inflation over again ?

Security in use of gold coins.

Countries that have suffered from the evils of extravagant paper-money issues find a natural

remedy in abandoning the worthless paper and reverting to the primitive but safe monetary system of intrinsic value. France so restored its commerce after the disastrous experiment of the "assignats" of the revolutionary government; Mexico has done the same after the currency disorder that accompanied the civil wars there; in Austria a similar movement seems to be gathering way. Is it not likely that the peoples of Eastern Europe who have been ruined by paper money will refuse to trust to anything but gold and silver for a generation to come, as soon as they have a chance of showing their preference? There is illicit dealing in gold at Moscow even now.¹

Irving Fisher's plan might, it is true, be adopted by some countries—among those of good financial standing—while the rest either adopted the gold standard or remained with inconvertible paper. But some of the advantage would be lost in this way, for fluctuating exchanges between countries using different systems would remain. The author of the plan thinks that if it were adopted by any important country, such as the United States, its advantages would become so evident that other countries would soon follow. This is possible, and we may repeat that if the plan were carried out faithfully throughout the world it would constitute a very great progress in monetary affairs. But seeing that governments are so untrustworthy in matters of currency it is desirable to inquire whether there is not some other way of overcoming the slow variability, which we saw was the chief objection to

¹ Chase, *Economic Bulletin*, Vol. II., No. 1, p. 15 (1922).

the gold standard ; some way that does not put so great a strain on human nature.

Plan of regulating supply of (or demand for) gold.

The other way seems to be to regulate the supply (or demand or both) of gold in such a way as to stabilize its value. Gold is a commodity produced in a few well-defined areas of the world ; it would not be at all difficult to form a combination to control the whole output. Successful attempts on the part of private syndicates to control the output of other minerals are known, and of these the diamond syndicate deserves special attention. Some nine-tenths of the diamond output of the world is derived from a few mines in South Africa. These are controlled by a financial group, which dictates whether they are to be worked and to what extent : the same group also holds a stock of diamonds for the market, and though making no attempt to control the minor sources of supply, such as the river diggings, exercises such a monopolistic control of the purchase of raw stones that all but an insignificant fraction of the supply passes through its hands. The object of the syndicate is to keep the price of diamonds high and steady, and this has been accomplished most successfully, although the diamond is an article for which demand fluctuates greatly according to the degree of prosperity in the world.

Syndicate of nations for this purpose.

All this has been accomplished by a syndicate of private capitalists for their own profit. Could not as much be done by a syndicate of nations for the

good of the world?¹ The syndicate would not even have to be a large one, for the British Empire and the United States supply more than four-fifths of the world's production of gold, and if they combined to regulate supply, even though the other producers stood out, the syndicate would be little more troubled than the diamond syndicate is by the river diggings. We put it this way to show how easy the syndication would be; but of course it would be far better to include all producers—Mexico and Russia are the next most important; and still better would be a truly international organization, for all countries are concerned in international commerce, and if the gold standard is to be adopted they should all take their share of the work of regulating it.

To carry out such a policy of control, a Commission, appointed by the powers interested, would be needed. We shall not, here, discuss the constitution of the Commission, beyond remarking that the advent of the League of Nations should make it easier to agree upon; that, however, is not a matter of economics. Under the authority of the Commission there would be a scientific and an administrative bureau. The duty of the former would be to collect the information on which the decisions of the Commission were based. This would include (1) monetary and banking statistics of all countries, (2) statistics of prices in selected markets, (3) information on the geology and exploitation of the known sources of gold, (4) information as to law

¹ See the present author's *Gold, Prices and the Witwatersrand* (London, 1919), and article in *Journal des Économistes* (Paris, October, 1918), from which the following paragraphs are taken.

and finance of gold-mining lands and the condition of mining companies. This work is well enough known to make it unnecessary to enter into further detail.

The administrative functions of the Commission would be exercised, in the first place, through the intermediation of the constituent governments. No large staff would be required, unless the Commission decided to buy and work mines for itself.

What policy would such an international Commission try to realize? Apart from the exceptional situation created by the war, a restrictive policy is appropriate to a time of rising prices. The supply of gold does not adapt itself to changes in demand so quickly as is the case with other goods, for the gold in existence is large compared with the annual output. A real over-production can last for years before its natural effect on the value of the £m2,000 of metal stored in the world's treasuries becomes apparent. It is like an over-massive pendulum; the forces tending to bring it back into its position of equilibrium act too strongly and cause an oscillation on the other side. Or better, the production of gold is like the working of a machine with an inadequate governor, that sometimes goes too fast, sometimes too slow. The aim of the Commission would be to anticipate the changes of value, and correct them by intelligent action, instead of leaving natural forces slowly to stop and reverse the movement; that is, to play the part of governor.

This aim might be accomplished in times of rising prices by closing some of the least productive mines, and preventing the development of new ones. Such

a policy would involve paying compensation. The Commission would have to use funds supplied by the constituent powers to acquire such mines as it decided to close. There are many precedents for governmental action of this kind, and the government of the country concerned should facilitate it ; but as a mine whose yield is poor is of little value, the shares could be bought cheaply. When such action became necessary, the workpeople also should receive compensation ; the Commission would do well to imitate the methods of the Swedish Government, in the case of tobacco factories closed on the establishment of a state monopoly in tobacco. It does not cost much to give compensation to displaced workmen during a period of unemployment, and much discontent is avoided thereby.

It would be somewhat more difficult to arrange for new lands ready for development, but there is no impossibility in doing so. The Commission, or perhaps the government of the country, would buy ground on which the existence of workable ore had been proved ; and might arrange a system of rewards for the discovery of new fields. In all this it would be making an investment of capital with a view to a future time when it will become necessary to encourage production. Of all the undeveloped fields at present known, the most valuable is the far eastern portion of the Witwatersrand, and as this belongs to the South African government, the problem of dealing with it is simplified.

The life of gold mines is limited ; a time of over-production is followed by one of scarcity. For this reason the policy suggested in times of rising

prices is not really expensive ; rather it is a good investment. Later, when the production of gold becomes insufficient for the needs of commerce, the following methods would be open to the Commission to meet the scarcity :—

- (a) Exploitation of land which the Commission had acquired, and on which it had suspended work. The Commission would be able to raise the capital needed for this purpose.
- (b) Encouragement of systematic exploration with a view to discovering new ore deposits.
- (c) Encouragement of research into improved methods of extraction of gold.
- (d) Facilitation of employment of paper substitutes for gold.

Danger of regulation on the side of demand.

The scheme outlined above deals principally with regulating the supply of gold : the possibility of operating also on the demand side is merely touched upon in the reference to (4) use of paper substitutes for gold. It is possible that regulation of supply would not be enough and that it would be necessary to undertake deliberate action with regard to the ratio between the quantity of gold in use, and the quantity of paper currency of all kinds supported by it. But this is not without its dangers. The difficulty is well put by Mr. Hawtrey.¹

" Seeing that the interests of every country in regard to the gold standard depend upon the action of all the rest, and their action may vary quite capriciously within such wide limits, some sort of international co-operation seems

¹ R. G. Hawtrey, *Currency and Credit*, p. 360.

to be required. But international co-operation at once raises the delicate question of national obligations. If all the co-operating states are burdened with heavy war debts, it will be to the interests of all to keep down the value of gold by restricting the demand for it. Are they going to combine, openly or under a pretext, to depreciate the medium in which their debts are payable? This is not quite the same thing as to inflate a paper currency for the purpose of lightening the burden of the national debt, for gold in any case has an intrinsic value as a raw material of industry. But the limits of its variation are incalculably wide, and a general understanding to economize the use of it as currency would have a prodigious effect. But if states generally agree to moderate their efforts in this direction, the picture of the plenipotentiaries deliberating how great an artificial demand for gold must be set on foot in order that the burden of their debts may be made sufficiently heavy and honour may be satisfied is not altogether convincing."

Regulation of supply distinguished from other forms of managed currency.

It may be said that the plan for regulating gold is only another instance of a managed currency and comes under the same condemnation as has been pronounced against Fisher's plan or against inconvertible paper: but there are two important differences. In the first place the action of any one country is of comparatively little consequence with regard to gold, since it is the world value of it that is in question. The paper money of a country can be brought into discredit by the foolishness of its own government, but to affect the position of gold seriously international action would be needed, and it is to be hoped that this would constitute a safeguard. Next, any action taken in regulating supply would only act very slowly, for the greater or smaller

output from the mines is only a small stream into the lake of existing gold. Manipulation of supply would therefore be no resource to a government in financial difficulties.

Policy suggested.

For these reasons the proposed regulation might keep gold from suffering those large but slow variations which were so marked in the nineteenth century. There would be scarcely any effect on the smaller and more rapid changes due to the state of trade. It is not here proposed to deal with the latter : the urgent problem is restoration of currency to a state not inferior to that existing before the war. Accordingly the steps suggested are (in order of time) first, to restore the gold standard ; second, to regulate the output of gold ; and subsequently, when the situation becomes more clear, it may be necessary to consider, on the one hand, whether the short-period changes due to trade cycles can be dealt with to advantage, and on the other, whether the longer changes can be controlled sufficiently by regulating the supply of gold only, or whether, despite its dangers, manipulation of demand for gold must also be undertaken by some international authority.

CHAPTER III

LEVEL OF VALUE

Probable future value of gold.

In the first chapter we discussed what level of value in currency would come nearest to doing justice to the various classes of the people, all of whom are more or less interested in the matter. In the second chapter we came to the conclusion that a restoration of the gold standard would be the safest and best method of dealing with the present chaotic state of currencies. If, however, that plan be adopted, money is fixed by an objective standard, and we have yet to consider whether the old gold units, the dollar, sovereign, franc, etc., can be used; consistently with the conclusions of the first chapter, or whether these units must be suitably modified. To decide this we have to consider not only the present value of gold, but what is reasonable to expect in the coming years, in which it may be hoped the restoration of currency will take place.

Estimated in accordance with the quantity theory.

The only basis for such an estimate lies in the quantity theory of money. It is often thought that

estimates of future prices can be made on other grounds, and that business men do make such estimates although they disregard, or are totally ignorant of, economic theory. This, however, involves an error, the conclusion is assumed in the premises. A business man, say, who is interested in cotton, forecasts the price by studying statistics of crop areas, and yields, cost of labour in cotton-growing districts, prospects of demand for cotton cloth, technical condition of manufacture, state of general trade, and so on. This method is quite sound for comparing the price of cotton with other prices ; the investigator may, e.g., conclude that during the next few years the price of cotton cloth will be high, i.e. will bear a higher proportion to the price of other things than it has done in the past. But at every step in the inquiry the price of something else is assumed—that of the labour of farm workers, for instance, or of factory hands, and there is nothing in the argument to show whether the general level of prices will remain constant, as assumed. In other words the unit of measurement is assumed, but the arguments do not cover the possibility that this unit may change owing to influences of its own, that have nothing to do with cotton.

Monetary theory on the other hand shows that the general level of prices depends on the relation between the total amount of goods produced and the total amount of money in use, as well as the activity with which the money is passed from hand to hand. These points must be considered in turn.

Production since the War.

As to production, there is a consensus of opinion that it has fallen off, but not by a large percentage. No acceptable general statistics are available. Figures showing the production of particular products are published, but production of wealth as a whole is so complex and varied that it is hardly possible to form a quantitative estimate.

Expansion in the New World.

During the war the New World and the Tropics, as producers of raw materials, received a marked stimulus due to the urgent needs of the belligerents: production increased greatly. There has been a falling off since, but it is safe to say that in these countries (where, too, the normal increase in population has not been checked) production is considerably greater than in 1913. As an illustration of this we may quote certain figures for the United States; the monthly output of steel rose from 2,651,000 tons in 1913, to 3,568,000 tons in 1920; the monthly tonnage of vessels cleared rose from 4,440,000 in 1913 to 5,748,000 in 1920; the average production of wheat, oats, and maize in the years 1912-13-14 was 4,770 million pounds, while the average of the years 1918-19-20 was 5,178 million; though it must be noted that the amounts of steel and shipping show a falling off since the depression in trade set in.

Falling-off in Britain.

In Europe the position is very different, as is well

known ; even in Britain production has not recovered its pre-war magnitude. This is due partly to the general economic disorganization of the world, which deprives British manufacturers of a good part of their usual custom : and partly to the psychological as well as the material effect of the war on labour. In Britain, fortunately, the material loss in labour power, due to death, wounds, disease, and under-feeding, is not important, but war, and the violent changes in price level and incomes attending it, have left behind a restlessness, and discontent with the existing system, that interfere seriously with the amount of work done. Thus Prof. Bowley has just stated¹ "there are strong reasons for holding that the national income, even if every one was at work, would be less than in 1913, when the change in purchasing power of currency is eliminated;" and moreover the percentage out of work is unusually high.

And the Continent.

On the continent of Europe loss of human working power is greater : there has been much destruction of actual capital—houses, machinery, cultivated fields, etc. : and the disorganization of industry, due largely to monetary causes, is not, as in Britain, a mere reflection from other countries, but is present and acute. The monetary disturbance alone is so demoralizing that where depreciation of currency has gone very far, lethargy and hopelessness result from it. Statistics are lacking, but it is clear that the output of Germany must be

¹ *Econ. Jour.*, March, 1922, p. II.

considerably reduced, that of Austria and neighbouring countries probably worse and that of Russia deplorable.

The reduction in Europe outweighs the expansion in the New World at present, but, of course, recovery, faster or slower, is to be looked for. A settlement of monetary difficulties would do a good deal towards it. Probably a few years will be needed before the production of the world again reaches the level of 1913, and when it does the distribution will have changed; Europe will have lost in relative importance and the new countries gained.

Change does not account for price-level.

The statistics available do not suffice for making a quantitative comparison between the magnitude of production now and before the war.¹ Nevertheless,

¹ Though a quantitative comparison is hardly practicable, it is tempting to make an approach towards it, and perhaps instructive, provided too much weight is not attached to the figures. To this end we may divide the world into four regions, as follows:—

I. United States with Canada and Australasia.

II. Western Europe (England, France, Germany and adjacent small countries).

III. Southern and Eastern Europe.

IV. The Orient.

Each of these groups has a larger population than those preceding it, but a smaller wealth per head. To a first rough approximation the economic importance of the four groups may be taken as equal.

Now if we consider the decade that includes the war and its immediate sequel, say 1913–23, we see that in the United States the progress in wealth has been up to the normal but prodigious rate characteristic of that country, a rate that can hardly be taken as less than 40 per cent. Most estimates are higher: see, e.g., Irving Fisher's *Purchasing Power of Money*, p. 479.

In Oriental countries there is slow, but distinct, progress, and it has been in no way interrupted by the war; probably 5 per cent for the decade would not be an exaggeration.

In England, France and Germany production has been dimin-

we need not be greatly concerned at this deficiency, for the change in prices has been so great that the change in output cannot play more than a small part. The brief discussion just given shows that, except in Russia, the fall in production in such countries as have suffered by the war is moderate and is largely balanced by the natural growth of the rest of the world, and it should be remembered that though nearly all Europe was concerned in the war, Europe's population is only a quarter of that of the world. Thus the loss of production on the whole can only be a small percentage ; if the money supply of the world had not been altered, the relative scarcity of goods could only have made them a few per cent dearer. In attempting to explain a rise of prices amounting to a hundred per cent and more, we are justified in almost leaving the question of production out of account.

Money since the war.

We turn, then, to the question of how much money there is in the world—and, incidentally, get a clear emphasis on the fact that money is not wealth.

ished by the war, but probably not by more than 25 per cent, if as much.

In Eastern Europe the loss of wealth has been very great, but this is compensated, in part, by the position of Southern Europe (Spain, Italy, Greece), where the effect of the war has been quite small. Let us guess the average at 40 per cent.

These figures are all frankly guesses, but their combined result, $40 + 5 - 25 - 40$, divided by four, or 5 per cent, is strikingly small, and it is even possible that there has been no reduction at all in total output. It must be remembered that the population of the world has increased, despite the war, so that if the total output has been approximately maintained, the output per head has decreased, and while some parts of the world have grown in wealth, others, already poor, have grown poorer.

Before the war it was easy to compare the money of different countries, for whether gold, silver, or paper, it was nearly all reducible to the same gold standard, so that pounds, francs, dollars, marks, roubles, rupees, could all be expressed in terms of each other ; the only exceptions were that China used silver (for its own sake, not as change for gold) and a few unimportant states, inconvertible paper. Now the currencies of the world are all fluctuating in their mutual relations : the best we can do is to choose some date, and try to express the value of each currency in gold, by means of its foreign exchange rate, taking advantage of the fact that New York exchange has been kept steadily at par with gold.

For convenience we will classify the nations of the world as follows :—

Classification of countries.

CLASS A. Nations whose currency is depreciated relatively to gold, by less than 50 per cent (mostly by much less than that), so that, should they decide to adopt the gold standard, there is a reasonable prospect of attaining it.

CLASS B. Nations whose currency has fallen to between 50 and 20 per cent of its nominal gold value, but whose financial position is nevertheless fairly sound.

CLASS C. Nations with extremely depreciated currency.

70 RESTORATION OF THE WORLD'S CURRENCIES

The classes are as follows :—

A.

United States

Canada

United Kingdom

South Africa

Australia

New Zealand

Egypt

India

Netherlands

Sweden

Norway

Denmark

Switzerland

Spain

Argentina

Uruguay

Chile

Brazil¹

Japan¹

China²

B.

Belgium

France

Italy

Greece

Finland

Jugo-Slavia

Bulgaria

Rumania

Germany

Poland

Czecho-Slovakia

Austria

Hungary

Esthonia

Latvia

Lithuania

Portugal

Turkey

Russia

C.

It will be seen that Class A is not only the largest but by far the most important. One should not let the financial difficulties of continental Europe obscure the fact that most of the world is still in a moderately healthy condition as far as money is concerned.

Gold equivalent of currencies.

The matter on which we desire information is how the monetary resources of the world, if reduced

¹ Brazilian currency fell, in 1921, below 50 per cent, but has partially recovered. Chilian has lately fallen below 50 per cent. Both these countries were used to currency fluctuation before the war ; they have not been impoverished by the war, and on account of their wealth and resources may conveniently be put in Class I.

² China remains on a silver basis, but the rate of exchange of its money has throughout been good.

to the common standard of gold, would compare with what they were before the war. That there has been great inflation is well known, but to draw any useful conclusion we must get the circumstances down in figures. The increase will not be anything approaching the increases in local currency among the belligerent states, for when so great an inflation has taken place—as, say, in the case of marks—the fall in value has more or less compensated for the increase in number, and we must be prepared to find that the total currency of such a country as Germany is not equivalent to more gold than before the war.

Sources of information.

The stock of money (coin and paper) in various countries has for many years past been tabulated in the annual reports of the United States mint. The figures are very incomplete, and subject to many inaccuracies, but they do enable one to get an approximation of which use can be made. In countries such as England before the war, in which gold coins were largely used, the estimates of their number are necessarily rough; the same difficulty arises in the case of silver coins—no proper census of these is possible, and the records of the mint would only give an upper limit to the number, as many coins are melted or withdrawn from circulation. Figures of paper money are more trustworthy, as there is a definite record of issues, and not many bank- and treasury-notes get destroyed or lost. There are, however, plenty of sources of error; paper money issues fluctuate at different times of the year,

and it is not possible to secure records from all countries at the same date, varying amounts of paper are held by banks and are not really in circulation ; moreover, though the records of the issuing authorities are usually complete, those of the banks are not—even in England the banks do not publish a clear statement of the cash they hold.

For recent statistics the *Monthly Bulletin* of the League of Nations is a valuable source, and has been used to make an estimate for March, 1921, for comparison with the U.S. mint figures of January, 1913—a representative pre-war date. The more recent estimate is rather the more certain, since gold had almost disappeared from circulation by that date. The *Monthly Bulletin* only gives records of paper money, its amount and value ; this has been supplemented by some information about silver and gold from the *Statesman's Year Book*.

Bank credit money.

Gold, Silver, and paper money are, however, not the only means of payment ; bank credits play an even greater part in countries with a well-organized banking system ; to this we shall return.

Illustration of statistics.

The details of the estimate are given in the appendix, but before quoting the results arrived at it will be well to give an example of the method used. Thus, taking the case of Sweden, we find from the U.S. Mint Report for 1913 that the following figures (converted from dollars into pounds) are given for December 31, 1912 :—

Gold in the banks	£5,500,000
Gold in circulation	650,000
Silver coins	1,750,000
Uncovered paper	5,250,000
 Total	 £13,150,000

The last item means that the paper in issue exceeded the gold held to cover it by £5,250,000, so that the total paper money was £10,750,000. This does not change the total given above, because the gold in the banks was not in circulation. Accordingly the monetary supply of the people of Sweden was equal to £13,150,000 (Swedish crowns being then at par with sterling).

At the later date chosen (March, 1921) the circulation consisted entirely of notes of the national bank, with subsidiary silver and copper coins. According to the *Monthly Bulletin* the notes amounted to 717 million crowns, which at par would be equal to £39,500,000; but as the Swedish crown, at that date, was worth only 87·5 per cent of its nominal value in gold the notes were really equivalent to £34,500,000 (not in sterling, which also was depreciated, but in gold pounds, or sovereigns.) To this we must add the silver, which was but slightly increased from its previous amount: making £36,250,000, or not far from three times the pre-war total (more precisely 276 per cent of it). In most countries the increase has not been so great as this.

India and China.

From the countries in Class A we may first separate China and India. The financial position of both is good, but it is not easy to include either in a statistical

estimate. As regards China, information is almost entirely lacking ; India, on the contrary, has a well-managed statistical service, but its currency being largely metallic cannot be estimated with much certainty. At the present time sovereigns are not current, though they are legal tender, as they are underrated by the official regulations. The circulation consists of rupees and rupee notes, the actual coin being still the more important constituent.

Class A countries.

Leaving them out for the present, it appears that the class A countries had, in 1913, £m1459¹ of money (gold, silver, and paper) ; in 1921 the issues of paper, reduced to their actual equivalent in gold, reached £m2138, to which must be added about £m200 for silver coins.

The increase in the course of these eight years was 60 per cent. India was credited with £m270 of money in 1912, by the Mint Report. In March 1921 it had 1,662,000,000 paper rupees, and, probably, about double that number of silver rupees ; the price of the rupee was a little below the old par of sixteen pence sterling, but in gold this would be twelve and a half pence, making total value of round £m300. From this it would appear that the Indian currency had only increased to a small amount, although a great deal of silver was exported there during the war, and the circulation of notes also increased. This result is partly explained by the fall in value of the rupee ; probably there has not been so great an

¹ All these amounts are stated in gold pounds, not in depreciated English paper.

increase in total value as in the other countries of class A, but the estimates of coins in India are not reliable.

China has gone on undisturbed with its silver money, the increase of which, through mining or importation, can only have been moderate ; but it increased in gold value, for the price in 1913 was 27 pence per ounce and in March, 1921, it was 32 pence (gold).

Class B.

Turning now to the second group of states, of which France is the most important, we find more extensive changes. At the end of 1912 the total monetary stock was estimated at £m521 ; this included gold, which was actually employed for circulation to a considerable extent, silver—including the five-franc pieces, which in their capacity of legal tender are a relic of an earlier monetary epoch—and bank-notes. The monetary stock of France has always been large, for though a rich land, the people have not developed the habit of paying by cheque, preferring to use Bank of France notes, of which they keep large stocks in hand ; they also show a marked liking for actual coin.

In France the note issue is four or five times as large as before the war ; this, naturally, has caused notes to depreciate heavily, so that the value of the currency in terms of gold has not increased to anything like that extent. The depreciation was great enough to leave the silver coins undervalued, so they have largely been withdrawn or else been melted and sold. Recently some new coins of reduced fineness have been introduced to replace paper money of very

small denomination, but the amount of silver must be much less than in pre-war times. The note circulation for the group of states is £m840, which is 61 per cent above the whole previous circulation : including silver the increase is somewhat greater. This increase is more than for Class A; which is contrary to expectation, as the "B" countries have not gained in wealth like America, India, etc. : it is true that France and Italy have extended their boundaries, but probably the chief reason for the excess is the custom of hoarding bank-notes that is found in France. Cassel notes an interesting case of this in Sweden.¹

Group B as a whole is much less extensive and wealthy than A, so that the influence of its rate of increase in monetary resources is less.

Class C.

In Group C statistics are totally lacking for Russia, Turkey and two or three of the small new states cut out of the old Russian Empire. The circulation consists throughout almost exclusively of paper ; even subsidiary coins have disappeared, so that bank-notes have to be used for the smallest payments ; there are notes in use whose value is less than a farthing. The pre-war statistics from the U.S. Mint, omitting those countries for which there is now no information (and hence omitting the Russian portion of Poland) is £m503, showing that this group of states, of which Germany is by far the most important, counted for about as much in monetary affairs as Group B.

¹ Op. cit., p. 109.

"C" countries' money reduced in value.

The published returns of paper money for March, 1921, show an anomalous result: although the countries in question have been flooded with paper certificates of purchasing power, the total value of that money is less than it was before the war. The figures for Germany deserve special consideration on account of the predominance of that country in Group C. Some eighty milliards of paper marks, nominally equal to the preposterous sum of 4,000 million pounds, were at that time only worth 6·72 per cent of their nominal gold equivalent, so that the whole of the money in Germany (or rather of German money, including a good deal held abroad) only had a value of £m262 (gold) in foreign exchange, whereas before the inflation took place the money of Germany was worth £m285. This, moreover, was at a time when the mark was, to judge from our present standpoint, high; at the end of March, 1922, the New York quotation was 33 cents for 100 marks, or 1·39 per cent. of the nominal value. On this basis the whole bulk of German money, increased as it had been during the year, was worth less than £m100.

Total value of money related to total real wealth.

This result brings home a point that is often overlooked in monetary discussions, viz.:—that the money a country needs to carry on its transactions bears a necessary relation to its real wealth. A country that has been impoverished by the war does not require so much money, reckoned by its real purchasing power, as before, however freely the printing press is set to turn out nominal promises

to pay. In the case of Group B (France, Belgium, Italy, Greece), if the gold value of their currency has increased notably, this is because gold will not buy as much as it did ; reckoned in ability to purchase goods it would be found that the total currency would buy little if any more than before the war, and if there is a small increase it is due partly to money hoarded, rather than to what is in actual circulation ; for those countries have lost in real wealth.

Effect of poverty in "C" countries.

Germany has suffered enough to leave its demands for money considerably less than before the war. At the same time £100,000,000 is far too little for a country of that population and wealth ; so we are justified in concluding that the present level of the mark is below what the true economic situation requires. It is well known that in Germany and other countries with extremely inflated currencies, the "internal purchasing power" of the local currency is higher than the "external," ; i.e., money will go further in buying goods and services produced in the country than in buying imported goods. This is partly due to abnormal relations with the outside world (e.g., export of capital from Germany to avoid expected confiscatory taxation, or loss through further depreciation of the mark), but it is also a sign of poverty. The labour of the country is so depressed in its economic circumstances that, wages and salaries are very low, and a visitor from more fortunate parts of the earth finds living exceptionally cheap. He is in the position of a well-to-do city man going to live in a frugal country district ;

such a man would not have to pay less for "imported goods," like clothes from his West-End tailor, but would pay low prices for the services of his gardener or groom, or for supplies of eggs and milk. In the same way the world price of transportable goods holds in Germany, but the price of local products there is very low; accordingly, but little money (reckoned by its purchasing power in the world market, or, in other words, by its foreign exchange value) is needed in impoverished Germany. The actual amount which would be in proportion to the wealth of the country is doubtless more than £m100 and less than £m262, implying that if the situation is not disturbed by further issues of paper money, and time is allowed for it to settle down to stability, exchange would become higher than 33 cents, but lower than the March, 1921, figure of 160 cents per hundred marks.

Net increase in world's money.

Summing up, it appears that we have to leave Russia, China and a few small countries out of account; and that for the rest of the world the supply of money (in the narrower sense, not including bank credit) has increased from £m2,750 to £m3,950 reckoned in gold, an increase of 44 per cent. If we agree, as suggested above, that the world's business is but slightly different from what it was before the war, we should expect the value of gold to have fallen in the same ratio as the amount of it and its paper substitutes has increased, or, in other words, a rise in gold prices proportional to the monetary increase. We have not, however, completed the

investigation, for bank deposits, which serve equally with coin and notes as means of payment, have yet to be reckoned in.

Cash and bank deposits.

It has often been debated whether a change in price level is more closely associated with change in the quantity of money (in the narrower sense) or with change in the total means of payment. The true position appears to be that abundance or scarcity of means of payment produce the same effect on prices, whatever form they take; but that the amount of bank credit in existence at any time is closely related to the money, so that it is legitimate to base the effect on the latter, and in certain respects more convenient to do so. Banks in making loans keep a proportion with their cash resources which is pretty clearly defined at any given time and place, and which changes but little unless in some such upheaval as the late war, and "deposits" are closely correlated with loans, being to a large extent only a reflection of the latter.

Fluctuations in trade cycle.

Such changes in the ratio of credit to cash as do occur in ordinary times are associated with the well-known cycles of good and bad trade; during a period of boom, bankers are apt to relax their rules somewhat, and share in the current optimism, or if they do not actually believe in the optimistic forecasts of trade, competition among their number causes them to act as if they did. Bank credit money is extended, relatively to holdings of gold, or even of legal-tender paper. During the time of

retrenchment and depression after a crisis, the reverse is true. Apart from these fluctuations bank credit is usually adjusted to cash with so much uniformity that it makes little difference whether arguments are founded on the amount of cash or of total currency in existence. But we cannot assume that the same is the case in the exceptional period of the Great War.

Inflation of deposits during war.

In all countries inflation has shown itself in bank deposits. The usual processes of government loans and expenditure out of them have resulted in enormous creations of bank credit, and since the false prosperity due to the war has disappeared it has been found difficult to reduce the credits once given. The system of bank deposits and cheque currency has been much lauded for its adaptability to changes in trade, but the praise seems exaggerated ; currency expands very readily when needed, it is true, but the corresponding contraction is always effected with difficulty. When the contraction is merely that involved in an ordinary trade cycle, it is moderate in amount, and a practicable degree of severity on the part of bankers may suffice to bring it about, especially as the continuous growth in population and wealth that western countries show will, in time, compensate for the effects of depressed trade. But the abnormal and gigantic fluctuation produced by the war is not so easily disposed of. There are masses of credit in existence that represent nothing but the exaggerated expectations of the time immediately following the war—"frozen credit" that banks

are unable to get out of. The process of liquidation is likely to be a long one. In the end bankers will probably resume their practice as to keeping loans in proportion to legal tender, without much change.

Statistics of bank deposits.

The banking resources of the United States now take the first place, and we may usefully consider that country first, as there is an admirably complete system of official banking statistics to depend on. According to the Reports of the Controller of the Currency, total "individual deposits subject to cheque" have grown from 8,241 million dollars (£m1,686) in June, 1913, to 15,551 million (£m3,182) in June, 1920, or by 89 per cent. In the United Kingdom totals of bank deposits have to be extracted from the reports of banks published at various dates, and not on a uniform system; moreover, they do not distinguish between deposits subject to cheque, and time deposits, which latter are an investment rather than a means of payment. The ratio of increase during the war can, however, be given with some approach to accuracy; it is stated¹ as from £m1,142 (June 30, 1914) to £m2,275 (June 30, 1919). The latter sum at the rate of exchange then current was equal to 2,118 million pounds gold, showing an increase of 85 per cent, or practically the same as in America. German bank deposits amount scarcely to one-quarter as much as American, and French to one-eighth, banking being much less developed there than in the English-speaking countries. British and American banking exceed in the

¹ League of Nations, *Currencies after the War*, p. 142.

magnitude of their operations than of all the rest of the world ; and the greater magnitude of American is not properly shown by the foregoing figures, on account of the inclusion of fixed deposits in the British returns.

Frequency of use of money and deposits.

It will be seen that American deposits alone provide an amount of credit currency nearly equal in value to all the money (coin and notes) in the world ; hence, in considering the influence of quantity of currency on the level of prices great weight must be allowed to bank credits, and the more so because the frequency of use of deposits is greater than that of coin or notes. According to an estimate by Irving Fisher in the United States, before the war, money passed from hand to hand on the average about twenty times a year, but bank deposits were transferred quite fifty times, so that the preponderance of payment by cheque was immense.

Relative increase in money and deposits.

It would be difficult or perhaps impossible to balance precisely the influence on prices exerted by increase in legal tender and in bank deposit currency respectively, if there were any important difference between the two increases. One could not get much beyond saying that the influence of deposits is the more important in America and Britain, that of money in the narrower sense in most other parts of the world. However, the difference is not sufficiently great to throw much difficulty in the way of the arguments in this chapter ; money reduced to gold value has increased a little less than 50 per cent, according to the data given above, while deposits

have increased perhaps 75 per cent in the world as a whole. We may, therefore, look for an effect on prices (measured in gold) intermediate between these figures.

Device of an imaginary bank:

Difficulties arise in statistical study of the relations between quantity of money and prices owing to the large number of institutions concerned in the supply of currency, and the circumstance that some of these conduct other business as well. We may attain to clarity of thought by a certain ideal simplification, and may then endeavour to analyse the actual statistics and procedure in such a way as to accord with the ideal. It consists in supposing that all matters connected with the supply of currency to the public are relegated to one bank, which restricts itself to that function. Such a bank would then perform the work of the mint, buying gold from the producers and issuing it as gold coins ; also that of the Treasury in so far as it is engaged in issuing treasury-notes ; of the central reserve bank which keeps the main reserve of the country, and acts as banker to the commercial banks ; as well as of the commercial, note-issuing or cheque-paying banks themselves. This ideal bank would carry on the usual business of discounting bills and making advances, but would not do any business other than purely monetary, e.g., it would not take part in the flotation of new issues, or deal in stock-exchange securities. The Treasury, in its usual capacity of receiving taxes and paying government expenditure, would be merely a customer of the bank, in the same way as a commercial company. It is no doubt not

possible to draw the line with perfect sharpness between business that would come within its scope or lie outside it, but the guiding principle is to separate dealings in money and credit from any others.

This imaginary bank would be the source of all the currency—coin, notes, and deposits : all payments made, by cheque or otherwise, except deposits in or withdrawals from the bank, would represent actual sales of commodities ; duplication of deposits and cash holdings would be avoided, and transfers of money that represented merely the internal working of the monetary machine would not appear. There would be a clear contrast between the institution supplying money, and the public using it. It would then be possible to state precisely the amount of money, the gold reserve used to support it, and the total of payments made with it. Monetary statistics should be criticized with that ideal in view. Thus, to take an illustration from England, bank-notes are issued against a reserve of gold, treasury-notes against a reserve partly of gold and partly of bank-notes; so that the total of notes involves duplication, the clearing banks keep deposits with the Bank of England, and the country banks keep deposits with the clearing banks ; cheques are drawn on the Bank of England to cover daily differences at the clearing house, and so on. These arrangements may be quite convenient in practice, but they necessitate much care in the interpretation of statistics.

Actual result as to currency.

Whilst the actual statistics are far from attaining this ideal of precision, it does appear pretty clearly,

that the currencies of the world, reduced to a gold equivalent, exceed those of the years immediately preceding the war by 50 to 75 per cent. Further, the amount of business to be carried on is at present, if anything, rather less than before the war. According to the usual monetary theory this would indicate, in the long run, a general rise in gold prices of 50 to 75 per cent. We are, however, not concerned only with the "long run," and in the short-date prospects of money trade fluctuations play an important part. It has already been pointed out (p. 38), that in a period of depression, not only is credit money reduced in total amount, and a part of bank deposit currency converted into "fixed deposits" at banks, but what remains on current account is transferred from hand to hand less frequently than before. This will account for a considerable fluctuation in prices, even if the total currency available does not change much.

Comparison with history of prices.

When we turn to the history of prices, for comparison, we find that in the United States, which retained the gold standard throughout, the wholesale index rose, in the early part of 1920 to two and a half times what it was before the war; in England the rise in currency was greater, but allowing for depreciation of English paper, almost precisely the same. But wholesale prices, which in normal times afford the best guide to the value of money, were undoubtedly affected, more than retail, by the wild commercial activity of the time, and the consequent exaggerated use of bank credit. Retail prices, just

because they are rather sluggish in responding to trade influences, give, in this instance, a better indication of what might be expected from the increase in currency in a time of good trade. The American cost-of-living index rose to just over double pre-war figures; in England the maximum was 276, which, corrected for depreciation of sterling, is 197, again in agreement with American experience.

Since the middle of 1920 there has been a rapid and almost continuous fall in prices, which has brought the American index down to 140 (i.e. 40 per cent above pre-war level) and the English, corrected for depreciation of paper money, which is now small, to practically the same level. It is still very unsafe to forecast even the immediate future, but it does appear that the fall in wholesale prices has gone about as far as it is likely to do. Retail prices are still falling, and are likely to do so till they reach somewhat the same level as wholesale.

Effect of future trade fluctuations.

We may then sum up the position by saying that the enormous increase in the supply of money, together with the check or fall in production due to the war, has had the effect of raising prices, at a time of feverish trade activity to double their former amount, and at a time of extreme depression to about 140 per cent. The divergence between these figures is greater, but not much greater, than what was observed in the course of violent trade fluctuations in the nineteenth century. That it should be greater is only to be expected, in view of the crisis in

history that caused the oscillation. It is reasonable to look for further oscillations in price level, but of less violence ; so that if the relations between money and production are not altered, we need not expect the price index to rise to 200 again, but we can hardly expect it to fall lower than the present level of 140. If it settled down to something like 150 to 170¹ that would accord with the estimate we have made of the increase in the amount of currency, lying, in fact, between the result obtained from money in the narrower sense and that from bank deposits. This is another verification of the quantity theory of money, to add to the large mass of statistical evidence already existing.

Summary.

The situation, then, is this : the actual currency used in most parts of the world is paper; in only one or two countries (United States and Switzerland in June, 1922) is the paper freely exchangeable for gold, elsewhere being depreciated to a greater or less extent. India and China stand by themselves, the latter using a pure silver currency, the former a combined currency of silver and paper, but on an artificial basis, not corresponding at present to the value of either silver or gold. The actual gold has accumulated to an abnormal extent in one country—United States—which holds quite one-third of the world's stock. In consequence of the lack of effective demand for gold in many other countries (which is another way of saying that they use inconvertible

¹ As Sauerbeck's index was 85 just before the war, it should be from 127 to 144 according to this estimate.

paper instead), the value of gold has fallen, and seems as if it would settle at about two-thirds of its value in the years immediately preceding the war. This is deducible from the present situation, in accordance with the accepted theory, and it appears to be confirmed by the actual trend of prices, but as the present is a time of depressed trade it is to be expected that a recovery in prices should occur in the course of the next few years, and as the influence of deflation seems to be about exhausted, we may conclude that the value of gold will tend rather to fall slightly than to increase, unless new circumstances arise to affect it.

Possible modifying circumstances.

The circumstances which in the course of a much longer period will regulate the value of gold are the course of growth of the world's trade and the productiveness of the gold mines. It is not, however, slow-acting causes that we have to consider in this chapter, as our problem is to estimate the level at which restoration of the gold standard may be effected in the near future. Circumstances which in the next few years might make an important change in the problem are those which would cause a redistribution of the stock of gold ; if the middle and east of Europe were to recover prosperity rapidly, such a redistribution might take place, or if those parts of the world were to abandon their extravagantly depreciated paper, and use gold coins in everyday life, gold would flow thither, and the monetary situation of the western nations would be altered.

Policy for the immediate future.

We are led to the conclusion that the gold standard might be restored in any countries that can afford it, and that the value of the money thus stabilized on the old units would not depart notably from what is indicated by those considerations of justice and convenience which we dealt with in the first chapter, but that the opportunity for restoration is not likely to be better than at the present time. Thus the pound sterling is now within 10 per cent of its nominal value in gold, and some other units are even nearer to par. If measures to secure the restoration of parity, convertibility of paper money and free trade in gold, were undertaken whilst the present depression lasts, a considerable section of the world could recover its former monetary position in these respects.

The gold standard might come to extend over the British Empire, United States, Holland, Switzerland, Scandinavia, Japan, Egypt and Argentina ; the existence of such a gold-using block would constitute a stimulating example to the rest of the world. Whereas if the matter is delayed until trade is again flourishing the restoration is likely to be more difficult ; the mass of paper money and bank deposits in existence would then be a more serious temptation to renewed inflation, and it would be less easy to recover a sufficient portion of gold from the United States to render convertibility secure.

Note.—April 8, 1922. English currency was quoted at 91 per cent of par with New York, and the following were at a higher level : Switzerland par, Mexico, Canada, Sweden, 98 per cent ; Holland, 94 per cent ; Japan, 93 per cent. These figures may serve to demonstrate that it is not necessary for a country to be wealthy or important to enjoy the advantage of a currency of good standing ; it depends entirely on the soundness of the policy pursued.

CHAPTER IV

PROCEDURE

THE position at which we have arrived is that the soundest method for restoring currencies to stability and good working order lies in the old and tried gold standard : that it is not impracticable to re-establish this through the greater part of the world : and that the consequence of doing so would be a general level of prices, for the time, some 50 per cent above pre-war level, or perhaps a little higher. This would still imply a serious loss to old creditors, though a tolerable compromise between old and new claims might well be corrected by subsequent gradual appreciation, rather than the reverse.

These general conclusions leave many questions of detail to be settled, and we must now consider the more important of these—trade in gold, accumulation of reserves, the present abnormal distribution of gold, the effect of international debts ; and must give a brief statement of the position in some of the leading countries, to see what procedure is needed in accordance with the extent to which depreciation has gone.

TRADE IN GOLD

Freedom of trade in gold needed.

A preliminary step towards establishing gold again as the international monetary standard, is to allow free trading in gold. During the war some sort of embargo was imposed in nearly all countries ; usually export was prohibited, and in India the Government forbade import also unless the gold were offered for sale to itself, at an official price, which, as a matter of fact, was considerably below what the metal would fetch in the bazaars ; a regulation (now withdrawn) which resulted in much smuggling. Further, many states prohibited the melting of gold coins, or sale of gold for jewellery or other manufacturing purposes. These restrictions were for the most part entirely useless, even in war time, and were based on a misunderstanding of the monetary use of gold. Gold reserves, such as are held by the leading banks, are a necessary and important part of the mechanism for operating the gold standard, and so the commercial public became used to scrutinizing them closely. If at any time a great demand was made on the central gold reserve of a country, so that it looked as if further continued export might lead to a risk of the reserve being all used up, serious anxiety was created, and stringent measures had to be taken to avoid that calamity. In particular the reserve of the Bank of England was watched, all over the world, as an indicator of the financial position.

Gold reserves designed to prevent depreciation.

The calamity feared was that the gold standard should be lost, and the paper money of the country depreciated. It does not seem to be generally understood that after the depreciation has happened it is no use to cling to preventive measures. Most people would see that while to keep a fire hose in good working order is a useful measure, it ceases to be important after the house has been burnt down ; and that resources devoted to maintaining the hose pipe and the water supply might very well be diverted to help rebuild : but the analogous point with regard to money eludes the financial and political world. The most that can be said for restrictions during war time, is that by cutting off the supply of jewellery, people were inhibited from a certain amount of extravagance ; and that by placing gold at the disposal of European governments these were, perhaps, enabled to bargain on somewhat better terms for credit in America.

The usual idea, however, is that retention of gold in a country somehow helps its currency ; a notion that lingers even when nobody proposes either to use gold for currency in that country, or to exchange gold for its paper money. Export is prohibited, and the gold is kept stored in the central bank, possibly as a memento of a lost system, possibly as a symbol of future restoration ; and meanwhile the country goes without what advantage it might obtain by selling a very acceptable commodity. Only in the last straits is the gold disposed of, as by the Bolshevik government of Russia when faced by famine and bankruptcy.

Free market needed to achieve this.

Moreover, even if a country did desire to maintain its gold standard, prohibiting the export of gold is not the way to do it. This was thoroughly realized before the war in England, where a "free gold market" was part of the national policy, i.e. no obstacle was put in the way of exporting gold when necessary. The Bank of England took steps to keep up its reserve by making it worth while for the rest of the world to send gold to London ; but it never refused to cash its notes and cheques in gold on demand. In this way the convertibility of English paper money was maintained, whereas if export of gold had been prohibited, English money, and even gold in England, would sometimes have fallen below the value of gold abroad ; for if people want gold for export, then gold restricted to use within the country is not worth so much to them.

Free trading not bound up with use of gold standard.

There is, in fact, no necessary connexion between freedom of trade in gold and the use of the gold standard. In a country which uses paper money exclusively gold is merely a commodity like another, and there is no more use in restricting trade in it than in restricting trade in tin or zinc. The absurdity to which unreasoned attachment to traditional notions may lead is well illustrated in the case of South Africa, where the mining companies which produce 8 million ounces a year, are allowed to export and sell it in the best market, whereas if a private person wishes to take a few sovereigns with him on leaving the country, they

are confiscated at the frontier. In the United States, after the Civil War, though depreciated paper was the authorized money of the country, gold was bought and sold in New York without hindrance, and the market so established facilitated provision of the gold needed when, finally, it was decided to restore the gold standard.

It may be suggested that such restrictions, if they do no good, also do no harm : but this is not the case. Free trading in gold allows a merchant to make contracts payable in gold or its equivalent, instead of in the local currency. This may well be advantageous in countries where foreign exchange is very fluctuating ; but it would not be practicable if the government throws difficulty in the way of obtaining the metal, in case it is actually required.

ACCUMULATION OF GOLD RESERVES

Accumulation with a view to future convertibility.

Accumulation of reserves and trade in gold are closely associated, and we had occasion in the foregoing section to note that reserves, while essential to the maintenance of the gold standard, serve no purpose apart from it. It has been the custom to keep a reserve equal to some approximately fixed percentage of the paper money in issue. If convertibility is suspended the only advantage of retaining the stock of gold is psychological ; it may encourage people to think that conversion will be resumed after a time. When the time comes to resume conversion, it will be necessary to lay in a stock of gold, if it is not already in hand, and

resources must be devoted to acquiring it ; but whether it is worth while to keep the stock in hand all through the period of inconvertibility is a question that must be answered in accordance with the circumstances of each case. If the inconvertibility is regarded as an accident, to be overcome at the earliest possible date—this is the general attitude towards it in England—then it may not be worth while to sell the stock of gold in the meantime ; and in the case of a large commercial country the sale would have a very upsetting effect on the value of gold. But, from the point of view of a single country, resources are often wasted in maintaining reserves ; thus it has been proposed,¹ in South Africa, to sell the Government's stock of some ten millions sterling when the price was 105s. per ounce, invest the proceeds in Treasury bills, and buy back from the Witwatersrand mines an equal weight of gold when the price had fallen to the standard (85s. per ounce)—a sound piece of business. It is hardly necessary to say that the suggestion was not carried out.

Misuse of gold reserves.

It should be remembered that the essential condition for convertibility is that paper money should have a value equal to that of the gold it professes to represent, and that this is attained by not having too much paper in proportion to the trade to be carried on. The presence of a gold reserve may have a small influence, when the other circumstances point to an early resumption of specie payments,

¹ D. C. Grieg, in the *Star*, Johannesburg.

in making people anticipate the resumption ; beyond this the reserve does not influence the situation. If by selling it and using the proceeds to cancel paper money the value of the paper can be raised notably, then a country will get nearer to convertibility by so using its gold than by keeping it as a "conversion fund." The misuse of gold in reserves is sometimes extraordinary. Thus in Spain, before the war, the central bank held 531 million pesetas in gold (£m21) as reserve for a note circulation some three times as large ; but the paper was not convertible, and was at a discount of 6 per cent. During the war prosperity Spain acquired so much gold that the bank's reserve rose to 2,271 million pesetas—a four-fold increase—while the paper circulation only doubled. On account of the generally favourable financial position of Spain and the moderation of its paper issues, Spanish money was quoted at par in 1919. Since that time Spain has allowed its currency to drop to a discount of 18 to 20 per cent. rather than part with any of its enormous gold reserve to maintain convertibility, although, apart from facilitating conversion, the stock of gold serves no more purpose than if the country were to devote its resources to piling up a vast heap of uncut diamonds (and Spain is a poor country !).

Effect of resuming gold payments on value.

But while it is wasteful on the part of any one country to keep a gold reserve that it does not use, it is fortunate, on the whole, that most countries have taken that line ; for if they had been strictly logical and disposed of their gold, pending resumption

of convertibility, the upset to the value of gold would have been even greater than it has been, and the effect on countries retaining the gold standard more embarrassing. As it is, a disproportionate amount of gold has flowed to the United States, which has avoided depreciation of its paper; and gold fell (by 1920) to 40 per cent of its pre-war value, though it has since recovered to 70 per cent. Actually Holland, Spain, Japan, and other countries whose financial position was favourably affected by the war, helped to absorb the gold turned out by belligerents like Austria, or taken from circulation as in England and France; although they did not maintain convertibility they supported the value of gold. If any countries decide to abandon gold altogether and adopt inconvertible paper in permanence, with its logical consequences, the world's demand for gold will be, by so much, reduced and the value of gold will fall. Such a policy is not likely, however, to be followed, and the general conservatism in the matter of gold reserves may probably be trusted to avoid any serious upset in value.

Resumption will be gradual.

Rather, it is commonly feared that nations which desire to re-establish the gold standard will compete for gold, to place in reserve, to such an extent as to raise the value rapidly and injuriously. This danger does not seem to be serious. The countries most likely to adopt the gold standard soon, such as England, Holland, Sweden, are already well provided with reserves, and would probably be able to retain their currencies at par, as Switzerland is

doing, without further gold resources, unless perhaps in case of some great disturbance arising out of international indebtedness—a point that is discussed below. The less prosperous states will come into the gold-using system gradually; their demands will, no doubt, support the value of gold, but as the United States will, presumably, be willing to part with some of their excessive stock, there should be no violent change. The value arrived at by the estimates of the preceding chapter, viz. 58 to 67 per cent of that immediately before the war (corresponding to 50 to 70 per cent rise in prices), is still low, so that if it were gradually raised somewhat by the currency demands of Central Europe, that should hardly be considered a disadvantage.

The provision and use of gold reserves to ensure convertibility of paper money is essentially a banking function, and so in most countries is relegated to the central bank. Such a bank possesses in the course of its ordinary business the means to accumulate a stock of gold when it desires, and can be left to do so with the least disturbance to the market. Thus the Bank of England, which at the date of the Armistice had £m74 in gold, increased its stock to £m126 by December, 1920, in pursuance of an avowed policy leading to restoration of convertibility.

INTERNATIONAL INDEBTEDNESS

Circumstances causing strain on gold standard.

In normal times the gold standard functions in such a way as to keep a nearly fixed ratio between the currencies of different countries; debts from one to another are constantly arising, but they are

liquidated without straining the monetary mechanism so far as to deprive any country of the gold it needs to maintain the convertibility of its currency. Of the circumstances, apart from war, which cause unexpected balances of indebtedness, none is more important than a bad harvest. A country whose main crop fails to a serious extent finds itself in this position : if it was in the habit of exporting part of the crop, it is no longer able to do so, and if it needs the whole of its harvest for its own consumption, it now has to import ; but the importation of other merchandise, being arranged many months in advance, continues for some time on the usual scale. Thus in a short time the country is called upon to pay the usual bills, without having the usual resources to do it with : an exceptional state of indebtedness arises. If the currency and banking of the country are well managed the difficulty can be surmounted without depreciation ; and, later, by cutting down its expenditure, the affected country can regain the usual situation.

This is the kind of strain that gold standard policy must be adapted to meet ; and if a similar strain arises through war debts similar difficulties follow. The sums involved in the debts and indemnities left behind by the Great War are so large that even a small fraction of them, demanded suddenly, would cause as much risk as the worst accident of peace time.

E.g. crop failure.

For instance, if half the French wheat harvest failed that country would find itself deprived of

3 or 4 per cent of its income ; if France were unexpectedly called upon merely to pay interest on its war debt to America and Britain, the loss of income would be greater. Such a vast debt, if it can be paid at all, can, of course, only be paid off in a number of years, and then foreign trade will adapt itself to the situation. That is, France would either have to find some additional merchandise to sell abroad, wherewith to pay the instalments on the debt, or it would have to do without some foreign luxuries it has been in the habit of buying. In either of these two ways the payments to and by France would be balanced, and the strain on the monetary system would disappear.

Unfunded indebtedness.

Unexpectedness is of the essence of the matter ; if the international reparations and war debts are put on a clear footing, involving payments of specified amount that are not beyond the resources of the debtor, and at specified dates, then they will not constitute a menace to currency stability any more than the enormous payments of interest by the new world to the creditor nations England, France, Holland, before the war, upset the gold standard then in operation. Even if these debts are not funded in such a way as to remove all uncertainty in their incidence, it is still unlikely, in most cases, that they would create monetary disturbance, for if any of the states concerned were faced with an unexpected demand for a large sum of money, it would probably refuse ; and debts do not affect exchange if they are not paid, except in so far as

anticipation of payment provokes speculation. It is, however, clearly desirable that the whole position should be regularized.

German reparations.

If France received from German reparations a sum sufficient to pay the obligations to Britain and America, French currency would not be interfered with at all. The case of Germany deserves special attention, as the amount demanded is the largest of all, and is without compensation from any other country. Very little of the reparations has yet been paid, but the effect produced on the value of German money seems excessive. This fact may fairly be attributed to the uncertainty of the whole situation. During the three years following the Armistice the payments, both in money and goods, were only two hundred million pounds, and we saw above that the value of German currency fell off by nearly the same amount. If reparation payments were the only influence one might conclude that Germany during this period had barely been able to pay its living expenses. But Germans hope that the reparation demands will be modified; and fear the increased taxation that will be necessary if the demands are enforced in accordance with the Treaty of Versailles. They therefore do not know how to arrange their trade and production with a view to the future; this has the effect of checking production, and in particular of inducing Germans to store up money in other countries rather than leave it at home to run the risk of a capital levy or other abnormally severe taxation. Such export of capital

is responsible for much of the depreciation of the mark ; but the depreciation once incurred upsets the Government's finances, and so drives it into further issues of paper money, which render the depreciation permanent. It was pointed out in the last chapter that the present foreign exchange value of the whole German currency is far below what is needed for the affairs of an intelligent and industrious nation of sixty million people. If the future financial position could be put, promptly, on a clear and secure basis, even on terms of great hardship to Germany, it is probable that mark exchange would rise ; but the longer the uncertainty of the situation lasts, the greater the permanent depreciation will be.

Commercial credits.

Beside the international obligations of governments, there is a large amount of commercial indebtedness between nations that is not on a properly settled basis. Commercial credits have been granted to a greater extent and for longer periods than is usually the case, and this creates uncertainty as to the demands that may be made on the debtor countries. It is not possible to estimate the amount of such credits, but as American exports to Europe have continued to exceed imports, despite the fact that Europe owes America very large sums, and ought to be paying them by furnishing an excess of imports into America, the floating credit balances in favour of America must be very large. Only the rehabilitation of Europe as a producer can put this situation right, so that, again, political uncertainty

is responsible for much of the difficulty in the way of exchange. But this particular difficulty most affects the countries like Germany, whose economic organization has been most damaged by the war ; it would not seriously interfere with restoration of gold payments by the more solvent and prosperous European states.

BALANCE BETWEEN RAW PRODUCE AND MANUFACTURE

Low price of raw materials.

One influence that has upset the customary regularity of foreign trade balances is change in relative demand for raw produce and manufactures. The war created an extraordinary demand for food-stuffs and certain raw materials of manufacture ; thus exceptional prosperity descended on Spain as producer of iron ore, on Australia and South Africa for their wool, Egypt for cotton, Argentina for grain and meat. All these commodities rose more in value than the manufactures for which they are ordinarily exchanged, and the remarkable situation was seen of Argentina being able to offer loans to England and France. After the close of the war it did not take long for this state of affairs to be reversed. When the drop in prices set in about May, 1920, raw materials were the first to be affected, so that in less than two years farmers throughout the world were faced with prices for their products hardly higher than prevailed before the war—sometimes even lower—while they still had to pay for machinery, clothes, and other imports, prices

which, while certainly below those of the boom, were still high ; the balance of trade therefore went heavily against the farming countries.

And Unemployment.

This meant—it has been pointed out repeatedly—that until prices of manufactures come down, farmers throughout the world are unable to buy freely, and manufacturers cannot be fully occupied. This is the root cause of the unemployment in England, and it can only be met by a restoration of a proper ratio between the prices of raw materials and finished manufactures. Temporarily the want of adjustment has a most upsetting effect on the exchanges ; thus the Indian rupee which reached 28 pence sterling in the early part of 1920 can hardly be maintained at 15 pence in the present year. Such departures from the normal balance of the economic system are very unlikely to occur except under the stress of a great war, so it is not necessary to take them into account in considering the practicability of restoring the gold standard.

ACCUMULATION OF GOLD IN THE UNITED STATES

Gold in U.S.A.

Gold has been used to quite a considerable extent to liquidate indebtedness to the United States. Before the war that country held about 1,872 million dollars, out of an estimated monetary stock in the world of 8,855 million, or 21 per cent (June, 1914) ; this may be regarded as a normal proportion, based upon the wealth of the country, and in accordance

with the well-known economic principle that the precious metals get distributed in the proportions needed by commerce. The amount increased to 3,295 million dollars in June, 1921, a gain of enormous magnitude, raising the fraction in the United States to 33 per cent, the world's stock having increased somewhat in the meantime (the movement has gone even further since). If the various countries had not clung to their gold reserves, regardless of want of utility, and had not passed laws prohibiting export of gold, no doubt even more would have been sent to America.

Federal reserve policy.

In the ordinary course this disproportionate increase in American gold supplies would have raised prices in America so much as to stop American exports; but during the war the belligerents wanted munitions and foodstuffs so urgently that all considerations of price were forgotten, and even after the war reconstruction needs were keen enough to cause American goods to be bought almost regardless of the bill that was thus run up. Now that a more natural state of affairs has come about, the excess of American exports is disappearing. Prices have dropped, and have been kept low by the stringent and remarkably successful effort of the Federal Reserve Board to bring about deflation. The American price index was brought down from 263 in April, 1920, to 143 in April, 1921, and has been kept almost without change for twelve months since. It is, however, probably beyond the power of any banking organization to avoid a rise when

trade becomes more active, and there are signs already (June, 1922) that a rise has begun.

The Americans have wisely recognized that both the amount of the gold imports and the circumstances in which they have come, are so unusual that the situation must be handled with a view to later developments. The gold should not be allowed to produce its normal commercial effect ; it is, in a sense, held in trust for Europe. Should prices now rise: in America the first consequence will be to raise the relative value of money in Britain, Holland, Sweden, etc., and enable those countries to resume payment in gold. Later, American imports may increase sufficiently to cause export of some of the gold in payment, despite a tariff meant to be almost prohibitory ; but the situation with regard to foreign debts is so uncertain that the normal commercial consequences may be hindered, and America may go through a period of good trade and rising prices, while still retaining the present exaggerated stock of gold.

Effects of trade revival.

If, however, some of it be re-exported to the more prosperous countries of Europe, there will be a renewed pressure towards inflation, which those countries would do well to resist by all the means in their power, adopting the same policy as America has in the last two or three years. Wisely used, the accession of monetary resources should promote a time of quiet good trade and liquidation of the excessive bank loans which still remain as a legacy from the unbridled speculation of 1919-20.

If some of the surplus American gold should find its way to the countries of Central and Eastern Europe, there to replace discredited paper, the consequences would be still better ; not only would those countries recover a sound monetary basis on which to trade, but America and Western Europe would be kept from the risk of inflation, so that improved economic conditions might be firmly established without any upset in prices. It seems clear that if by international agreements Germany, Russia, and the neighbouring countries can be enabled to restore their currencies on a gold basis, the Western world will be saved from a serious risk, and will secure a prospect of peaceable reconstruction that is well worth making some political sacrifices for.

LOCAL CURRENCIES

British currency policy.

Since the depreciation of different currencies varies from a few per cent to practically the whole value, the mode of restoration must vary too. In England the decision has already been taken to restore the old monetary unit in terms of gold, and there are other countries which will, without doubt, do the same. Earlier there was some talk of reducing the sovereign to a weight equal to four dollars, and fixing the pound sterling at that on the ground that such was its exchange value at the time ; but the suggestion was never backed by the weight of British opinion, and it is now unnecessary to make a change, the gold value of the pound having been nearly restored by ordinary commercial action.

There can be no doubt that the pound, as well as the Dutch florin and the Swedish krone, will be restored before long to convertibility with the gold coins formerly in use, as the Swiss franc has been already. It is noteworthy that Swiss currency has been maintained in value for many months; disproving the opinion, so often advanced, that it is impossible for any one country, especially a small one, to maintain the gold standard by itself in a world full of convertible paper.

These countries have each a large gold reserve, and will no doubt use it to preserve the convertibility when it is established. But some countries may prefer the more economical "gold exchange standard," such as was used by India successfully for twenty years. This can take several forms, but may perhaps be defined as a policy of maintaining the local currency at par with gold, by buying and selling exchange on some important gold-using centre. It was done by Austria before the war; the Austro-Hungarian Bank kept a portfolio of bills on London, by means of which it could always command enough gold at that financial centre to supply its merchant customers, and so keep Austrian currency from falling into depreciation. In recent years the currency of Australia, South Africa, and Egypt has been kept approximately at par with London, by a policy of exchange, despite the fact that English currency is not on a gold basis. This plan might be adopted by other countries, provided they have confidence in the sound management and stability of the money of the leading centre with which they deal, which, in practice, would be England; and it

would not even be necessary to wait until sterling had recovered its full gold value. The plan of holding foreign bills in partial replacement of gold as a reserve is becoming much appreciated everywhere; it is useful, not only in case of dependence on a more important centre, for the largest centres of exchange can meet a part of their responsibilities by holding bills or deposits on each other. This is a further step in economizing gold needed to carry out international payments, comparable with the method of the clearing-house banks which settle their daily differences by cheques on the Bank of England, instead of paying coin to each other. This method is expressly contemplated by the financial advisers of the Genoa conference (see Appendix, p. 143); it is to be welcomed as a step in monetary progress, but on condition that it should not be adopted so rapidly as to lead to a further reduction in demand for, and fall in value of, gold, else it might usher in another period of inflation.

French.

In France in March, 1921 (the date of the statistics in the Appendix), the local currency was worth 41·5 per cent of gold; it has since recovered to about fifty. Whether the franc is to be restored to equivalence with gold on the former basis, or a new, lighter gold coin is to be adopted, and some depreciation thus rendered permanent, is a question for the French people themselves to answer. If a new value is to be fixed one might suggest ten American cents (instead of 19 $\frac{1}{2}$). If the French consider that as a matter of financial honour and reputation the old

value must be restored, they must be prepared to make considerable sacrifices for it. The restoration could be effected quickly by withdrawing about half the bank-notes in circulation, replacing them by bonds bearing interest; this would involve an interest payment of nearly a milliard francs a year—a very serious addition to the national expenditure. Such a step would be needlessly drastic; the funding would no doubt be spread over a number of years, and helped by the natural economic recovery of the country, and by German reparation payments, if these are available. But the real burden of restoration would lie in the national debt rather than the currency; not only would some twenty milliards of bank-notes become, through the funding process, worth twice as much as at present, but the same would be true of the two hundred milliards of debt. Nevertheless, Mill's argument (p. 20) certainly holds good in this case, for most of the depreciation of French money has happened since the Armistice, i.e. since the great bulk of the loan contracts were undertaken. France is therefore now paying interest to its creditors in money of less value than it borrowed, and the stabilization of the franc at, say, ten cents, would make this defalcation permanent.

German.

German currency has, of course, gone far beyond the possibility of restoration at par; but the rate at which it is now quoted, 1,000 or even 2,000 to the pound sterling, is too low for the real economic situation of the country. If the question of reparations could be settled on terms that are really

practicable, and the political future were reasonably secure, there seems every prospect of a recovery in the value of the mark. It should then be possible to fix some rate of conversion into gold, though no doubt more difficulty will be experienced in keeping the exchange fixed than in more prosperous lands. It is hardly to be expected that the exchange position should become quite satisfactory until Germany has been living within its means, and exercising industries in a normal manner for some years. At present the supply of food, the supply of raw materials, and the market for manufactures are all uncertain.

Russian.

In Russia the situation is different again. There the fraction of value remaining in the paper money is so minute that it would be better to abandon it altogether and frankly admit the paper as valueless. The state of the currency is sufficiently indicated by the popular remark that you should pay your tram fare on getting into the car rather than on getting out of it, for your money will have depreciated in the meanwhile. If there were no law to prevent it, gold and other coins would slowly come into the country again, and would be liberated from hoards ; it would then be possible to do business on a secure basis. Nor does there seem to be any reason why the Government should oppose this; it has already, by the extreme depreciation, destroyed the capitalist class, and it has the less need of money, as it adopts the system of rationing the most necessary commodities. If it allowed free use of gold (and sub-

sidiary coins) it would be able to levy taxes in gold, and so should not suffer financially.

GOLD COINAGE

Gold coins.

The use of gold coins in everyday life has been treated with a certain contempt by the majority of economic writers lately. It is, of course, true that they can be dispensed with ; the public in all countries recognize that business can be carried on without them, and usually have an attitude of regretfulness, as towards a pleasant custom of the old times, that is not likely to be seen again, combined with resignation to the, commonly dirty, paper substitute. It is also true that a given mass of gold is more efficient as a reserve when concentrated in the national bank, than when diffused among the people. If then the greatest economy of gold is needed, the use of gold coins as currency is quite rightly dispensed with. That, however, is not the situation to-day ; the demand for gold has fallen so much that the stock is redundant and has fallen to less than two thirds of its previous value, so that if any country should wish to revive the circulation of gold coins for everyday purposes the means to do so are at hand, and there are advantages in the actual use of gold coins that tend to be overlooked at present.

Remedy for excessive depreciation.

The utility of a gold coinage is at its greatest in places where the abuse of paper money has been carried to the greatest lengths. Mexico has already adopted that means of getting out of the slough into

which the extravagance of revolutionary governments had brought it, and much of the revival in prosperity there is attributable to the possession of sound currency. In Russia, Poland, and Austria, if the people were not prevented by senseless government interference from obtaining gold and using it openly, there is no doubt that they would gladly devote some of their resources to buying gold. It is true that the countries in question are those suffering most acutely from poverty, so that it may seem wasteful to buy gold instead of food or raw material of manufacture, and so it would be if paper money could be trusted. But the advantage of a medium of commerce in which every one has confidence would certainly bring in more than the cost of acquiring it—sound money is an economical tool which it is foolish to try and do without. Moreover there must be much gold hidden in hoards in all countries where the owners fear confiscation; if they were given assurance that gold might be used freely the hoards would gradually come into use again, and the amount of gold to be brought from abroad would be considerably less than might be supposed.

Amount needed.

In any case the amount needed would not be very great, for the poverty of the countries in question will keep prices low. Probably in Russia to-day less than one pound of money per head would suffice (in the appendix figures for various countries are given). Much of this would take the form of silver and copper coins. Some gold is no doubt hoarded, so that £m50 worth of gold might be enough. Indeed, a much

smaller sum would serve to institute a reliable standard of prices, which would facilitate dealings even if there were not enough gold to carry all transactions through, and the ingenuity of traders would find means of placing transactions on a gold basis even if the metal itself were scarce. It may be thought that the gold coins would disappear from a country so poor. There need be no fear of that, however, for gold tends naturally to places where it will buy most, i.e. where prices are very low; if governments would only refrain from making laws prohibiting export and allow trade influences free play, there would be no such risk.

Use of token coins.

Silver and copper token coins should play an important part in the restoration of currency. They possess substantial advantages over small paper money; not only are they far more convenient to handle, more durable, and cleaner, but, having some intrinsic value, they are not liable to abuse to nearly the same extent as paper. A shilling has been described as "a bank-note for one-twentieth of a pound, printed on silver," a definition that brings out admirably the essential quality of a token coin. The printing is now done on an alloy half made of copper and nickel, so that (with silver at about 37 pence per standard ounce) a shilling can be turned out at a cost of about fourpence. A government could supply its people with subsidiary coinage whilst saving two-thirds of the nominal value, yet the remaining third would offer a considerable safeguard against debasement of the currency.

Very impoverished peoples will naturally want a larger proportion of small change to gold than is found in England or France. Thus in the restoration of currency in Russia if the estimate of one pound a head is correct it may be suggested that at least half should take the form of subsidiary coins ; the quantity of gold needed, and the expense would be reduced still further in this way.

Case of Austria.

To emphasize the matter further take Austria's case. If the powers were willing to do something really useful for that distressed country they might make it a loan of about forty million dollars, to be spent in equal parts in providing gold and subsidiary coinage ; this could be used to supplement the Government's income, on condition that thereafter all taxes should be payable in the same media, and that official salaries be cut down drastically to correspond with low gold prices, until there was sufficient economic recovery to permit of greater liberality. If care were taken that it were not abused and wasted, the loan would tide over the period of transition, and enable the Government, thereafter, to live within its income. As to the existing debt and paper money, they should frankly be repudiated. The debt is, for all practical purposes, repudiated already. A person who, before the war, had invested a million crowns in Austrian five per cents—quite a considerable fortune—is now receiving interest amounting to ten shillings a year ! It would be simpler to pay no interest, and just as useful to the investor, while as to those who bought

securities or money recently, at lower rates, their ethical claims are less than those of the old-time investor. The Government should base its action on sheer necessity, repudiate the lot, and make a fresh start—but not with the printing press.

Gold coins in wealthy countries.

At the opposite extreme are countries like Britain and America that can very well afford a gold currency if they wish it and where the preference of the people, in so far as it exists, should be a sufficient reason. The essential aim of convertibility, that of maintaining currency at the same value as gold, is secured so long as gold can be obtained for export, but habitual exchange between bank-notes and gold is an object lesson in convertibility that is not without use in times when currency standards have suffered so much from the financial difficulties of governments. More urgent needs must have precedence, but it would probably be well in any country that has succeeded in restoring convertibility to allow the issue of gold coins to the public so far as they were asked for.

Influence on level of value.

An increased demand for coins in common use would raise the value of gold, and such a measure would be opposed by those who favour keeping the value low. But the general trend of the arguments developed above is to the effect that the fall in value as compared with the period before the war has been excessive, and that in the next few years an influence supporting the value of gold is to be welcomed rather

than the reverse. In the long run the world can adapt itself to any change in price level, but the violent changes that have occurred recently, within a small part of a lifetime, leave unjust consequences, and should not be compared with the great change that followed the discovery of America, for the latter took a full century to complete.

WEIGHT OF COINS.

Troublesome incommensurability of coins.

One sovereign is nearly equal to five dollars, and one dollar a little more than five francs; the slight divergence from those ratios is a source of inconvenience that might be remedied. This has often been regarded as an academic triviality. But that it is not so, is sufficiently shown by the experience of Spain during the war in accumulating a vast gold reserve. As it consisted mainly of foreign coins, whose precise value was not familiar to the Spanish public, they could not be used for circulation, and as the mint was not equal to the task of recoining them in the national unit, the reserve was not utilized in the way it should have been.

Suggested modification of weights.

A slight modification of weights would permit of gold coins from different mints being interchangeable, an event which would no doubt be opposed by those parties who make a profit by exchanging coins, but which would be a substantial advantage to the public. Its practicability is sufficiently shown by the fact that gold coins from any state in the Latin Union are legal tender in the others, a rule that has

not been attended by any inconvenience. In the same way sovereigns from the mints in London and in Australia are used indiscriminately.

The weights of pure gold in the leading coins are as follows :—

Sovereign	.	.	.	.	7·322	grammes
Dollar (U.S.A.)	1·5046	×	5	=	7·523	"
Franc	0·29032	×	25	=	7·258	"
Yen	0·7500	×	10	=	7·500	"
Guilder (Netherlands)	0·6048	×	12½	=	7·506	"

It is here suggested that 7·500 grammes should be adopted by all countries using these coins. The effect would be :—

(a) The pound sterling, when restored to a gold basis, would be increased in value by a little more than two per cent. In view of the enormous fluctuations that have taken place of late years in its real value such a change could be managed without any dislocation. Nor could England's debtors reasonably complain of unfairness, seeing that they are now paying interest in pounds depreciated to an extent ten or twenty times as great, the increase in the weight of the sovereign would be some slight measure of compensation to the creditors.

(b) The dollar would be reduced by one-third of one per cent, an amount negligible for all purposes except the simplification of foreign exchange for which it is proposed.

(c) The franc would be affected slightly more than the sovereign, in those countries which use francs or the same coin under a different name, on a gold basis. It would then become convenient to issue

25-franc gold pieces in place of the 20-franc pieces now current.

(d) Japanese and Mexican currency would be unchanged.

(e) The Netherlands, by issuing a $12\frac{1}{2}$ -gulden piece of practically unchanged weight, would possess a coin of the international standard suggested.

Constituting an international coin.

When such a recoinage was completed the practical consequence would be that most of the available gold would take the form of sovereigns, 5-dollar pieces, 25-franc pieces, 10-yen pieces, or $12\frac{1}{2}$ -gulden pieces. These would become the most convenient material for settling such international differences as needed adjustment in gold, and all need for recoinage in the importing country would disappear. Usually where gold coins were in circulation they would be those from the national mint, foreign coins finding their way preferably into bank reserves; but there would be no need to forbid the use of foreign coins, and the habit of interchange would be a small step forward in the international organization of the world.

CHAPTER V

LONG-PERIOD EFFECTS

TO complete the discussion, we must now consider what influences affect the value of gold over longer periods, and whether the gold standard is likely to prove suitable in the course of a history that is not confined to the few years of recovery from the immediate upset of the war. The attempt to trace these longer consequences leads at once to a question which was touched upon in the first chapter but left unanswered. Are we satisfied with constancy of value as the ideal condition for a standard ?

Proposal for slowly-rising prices.

A certain school of writers advocate a gently, but continuously rising, level of prices ; not, of course, anything like the disconcerting changes of the war years, but rather like the experience of the early years of this century, when prices rose and the purchasing power of money fell at an average of one to two per cent per annum. The argument is that rising prices are stimulating to the business community, who are encouraged to make their full contribution to the progress of the community, and enabled to offer full employment to the working

classes. This argument is, however, a confused version of a familiar truth. Business men like rising prices because they get a larger share in the product of industry at such times. Wages do not follow the rise closely, and standing charges for rent and interest remain for some time unaffected, so that the farmer, manufacturer or merchant gains an abnormal advantage from the higher prices he receives from the sale of his products. The whole advantage, and consequent stimulus arises from the change in price level being imperfectly foreseen ; if such a change were adopted as a matter of national policy and arranged for with practical certainty, and for an indefinite time ahead, landowners, capitalists and workmen would bargain for their due share of the increased price, so that the adventitious gain of the business man would vanish.

Criticism.

Unemployment is of course a real loss to the community, and its avoidance a matter of the first importance ; but unemployment is associated, not so much with falling prices, as with the transition from a time of rising to one of falling prices. What is needed to minimize it is not continuous stimulation but steadiness ; in other words, avoidance of trade fluctuations. This is quite another problem, and a more difficult one. Moreover, it is a mistake to suppose that conditions which give the business classes an unusually large share in the product, and thereby create an appearance of prosperity, are good for the country. Professor Marshall's words before a Royal Commission at a time when the continu-

ous fall in prices provoked widespread complaint, should not be forgotten: "I think that it wants very much stronger statistical evidence than one yet has, to prove that the fall in prices diminishes perceptibly, or in the long run, the total productivity of industry; really I could not say that there was any serious attempt to prove anything else than a depression of prices, a depression of interest, and a depression of profits—there is that, undoubtedly."

"Then," said the Chairman of the Commission, "do I understand you to think that the depression in those three respects is consistent with a condition of prosperity?" "Certainly, the employer gets less, and the employee gets more."

In fact, whilst rising prices bring more profit to the employing classes, this very fact makes them careless, and the opposite conditions, which make it difficult to run a business with profit, eliminate the careless and incompetent employers, and screw the whole body up to a higher pitch of efficiency and enterprise. The statistical evidence, which is much fuller now than when Marshall was speaking, thirty years ago, does, in fact, show an improvement in the position of the working classes during a long slow fall in prices, rather than in the converse circumstances.

Opposite suggestion.

Should we, then, aim at a steady condition of falling prices—a steady appreciation of the standard, whether gold or any other? There is a group of writers who take this view. It is argued that the progress of the world puts a constantly increasing

supply of commodities and comforts at the service of the public, and that the easiest way to ensure the average man his share in this material progress is to allow prices to fall, slowly but steadily; so that incomes, both from salaries and from savings, shall become more valuable. To weigh this argument it is necessary to examine what is meant by constancy of value, somewhat more precisely than we have done so far.

Limitations of index numbers.

Indices of price level are usually based either on the prices of standard raw materials in the great wholesale markets, or on the prices of working-class necessaries, such as bread, meat, sugar, boots, etc., in the shops. The former give the more general and important indication of the value of money; but they are necessarily restricted to raw materials, for it is not possible to define manufactured articles with sufficient accuracy to obtain price quotations comparable from year to year. It would be of no use to try and define the price of an electric lamp, a motor-car, a sewing machine, or a typewriter, because these articles are constantly being modified in design and quality. But progress takes the form of improved technique in manufacture, and concurrent growth of amenity, rather than of cheapening of raw material or food. Such an invention as broadcasting by wireless may add enormously to the pleasantness of life on a small income, but it would not show at all in Sauerbeck's index number.

Accordingly, if the index number remains constant, that does not mean, in a modern progressive com-

munity, that the purchasing power of money is really constant; it is approximately constant with regard to the leading necessities, but to all classes except the very poorest there accrues a share in the benefits of invention and the growth of knowledge. It is therefore needless to arrange for a gradual appreciation of the monetary standard, as ordinarily understood; in order to give the recipients of fixed wages a share in progress, or to encourage small savings by making their value grow with the years.

Futility of pre-arranged fall or rise.

In essence, such a proposal is open to the same criticism as the former one; monetary changes affect the distribution of wealth merely because they are unanticipated or not fully anticipated. If all the world knew that the value of money was going to increase or to decrease steadily, the constant bargaining that goes on between wages, interest, and profits, would "discount the future"—would cause the shares to settle down to the same proportion that holds when money is constant in value. It is therefore futile to adopt any such policy; the simplicity as well as the security of a standard constant in value holds the field.

It may be retorted that this is inconsistent with the view just expressed as to the inadequacy of wholesale index numbers. It may be admitted that a more comprehensive index, if it could be framed, would be more trustworthy; but the practical difficulties of an index that would take new inventions into account rule out such an attempt, and the essential point is that there is no serious disadvantage

in adhering to such an index as Sauerbeck's which corresponds with the chief necessities of life. Its simplicity and stability provide the basis for a distribution of income freed from adventitious change of monetary origin.

Early history of prices.

The future course of the value of money should not be discussed without some slight acquaintance with its history in the past; it is of interest, and perhaps of importance, to know not merely what has happened in the last few decades, already referred to briefly above (p. 18), but over a longer stretch of time. Gold and silver were extremely scarce in the Dark Ages after the fall of the Roman Empire and even up to the discovery of America, for the previously known mines were practically exhausted; in the course of the sixteenth century new sources of supply for both the precious metals were found, and got into working order, so that by 1600 the supply was reasonably adequate to the commerce of the time. Since then—for more than three centuries—there has been no revolutionary change in the cost of producing the precious metals; this is shown by their rate of exchange for other commodities, i.e. by prices.

During the years 1595 to 1620 the price of the best wheat at the market of Windsor averaged about four and sixpence a bushel (quoted by Adam Smith, *Wealth of Nations*); in the opening decade of the present century the "Gazette average" for British wheat, then exposed to competition of Canada, Argentina, and other new countries, was three and

ninepence a bushel ; in the middle of the nineteenth century, before that competition developed, the price was higher, round six or seven shillings. It is true that in the sixteenth century English currency was on a silver basis, but that makes little difference, as silver exchanged for about the same weight of gold as shillings do for sovereigns now. It is certainly a remarkable fact that in the course of these three centuries, omitting the time of the Napoleonic and the recent great wars, it has never cost more to produce an ounce of gold than some twenty-four bushels of wheat nor less than eight bushels ; this despite the fact that the world was sometimes dependent on old and largely exhausted mines, and at other times floods of metal came from newly discovered fields, and that the progress of metallurgy and engineering has made such great changes in the mode of winning the metal.

Stability of value of gold.

Is this pure accident ? or is there enough stability in human demand for the precious metals, as well as for such primary goods as bread, to bring about a rough compensation to the accidents of mining discovery ? For it is a question of demand as well as supply. The value of gold must in the long run be sufficient to cover its cost of production, of course ; but the cost can only be defined when the demand is known, for if the world needs gold very badly it will be extracted even from poor and refractory ores, at great expense, whilst if the demand falls off such mines will be closed and only the more prolific sources utilized. History does afford some

justification for the popular choice of gold (or silver) as monetary standard, on the ground that its value is more stable than that of most things.

Comparison of past with probable future.

If there is anything in this—if the relative constancy of gold has not been pure accident—then it follows that an attempt to regulate its value would be more likely to succeed if the level chosen conformed to the experience of the recent centuries than if it departed much from that standard. The records of price in earlier times are too imperfect to form a precise index, but English prices have been tabulated in a moderately satisfactory way from about 1780. The whole period from 1780 to 1913 gives, on Sauerbeck's scale, an average of 105—if the time of the Napoleonic wars is omitted the result is slightly lower. In 1913 the index was 85 only; and if the estimate given in Chapter III is correct the index (assuming the gold standard) is likely to be from 130 to 140 during the immediately coming years. It would then be legitimate to conclude that if there is an attempt at conscious regulation of money on the lines discussed above, some further fall in prices would tend to stability, but that the level should not be expected to fall so low as it was immediately before the war. Such a course of events would restore some of the value taken away from the owners of monetary claims during the last few years, and would not accord too badly with the value received by governments for war loans in England and other countries where currency depreciation has not been excessive.

Value determined by supply and demand.

The value of gold is determined according to the same general principles as that of anything else ; there are, however, certain special features of its production and use that have to be considered. Of these the most important is that, on account of its durability, the stock in existence at any moment bears a large ratio to the annual output of the mines. This was touched upon above (p. 29), where the analogy with houses was pointed out. The valuation which is put upon the existing stock determines the margin of payability of mining ; thus though the stock is not now much different from what it was ten years ago, the demand has fallen so much that numerous mines which were then in comfortable circumstances have been forced to close ; the margin of production has receded. In the course of years this will bring about an increasing scarcity of gold, and so raise the value again, until it is sufficiently accommodated to the cost of producing new gold.

Slow adjustment in case of gold.

We may note certain minor conditions of this accommodation. First as to the capital involved in mining ; some gold is produced from alluvial sands, with only slight help from fixed capital, so that if the enterprise does not pay, it is readily abandoned, but the typical modern mine, especially on the Witwatersrand, is a huge affair, in which a million or so of money has been sunk. Accordingly the owners will keep it going if they possibly can, and even put up with some loss on their bare working expenses, if there is a prospect of recovery later.

Hence it comes about that many mines are being run, although the shareholders are getting no dividends, and are not likely to get any. New capital, naturally, is not to be had on these terms, so that, as such mines give out in the course of years, they will not be replaced by others, unless the value of gold rises. The falling off in output has therefore not yet reached its limits.¹

Uncommercial influences.

A circumstance that tends to the opposite effect, is that the fascination of gold mining and the gambling chance of making a fortune out of it makes people devote themselves to its production sometimes in an uncommercial way. It has been stated, on good authority, that more money has been sunk in prospecting for gold than the adventurers have ever got back again. The same influence is shown in another way when a boom on the Stock Exchange gives promoters the opportunity to raise capital from the public, which they would not be able to get in times of calm thinking.

Prices in gold-mining districts.

A more important circumstance is that gold is produced, chiefly, in remote parts of the world, which were not much engaged in the European war, and where prices have risen less than the world average. The most important gold field—that of the Witwatersrand—lies in a country which, though it actually fought in the war with distinction, sent a

¹ Annual output, in million pounds sterling, at par :—

1916	.	.	.	.	93	1919	.	.	.	75
1917	:	:	:	:	86	1920	:	:	:	69
1918	:	:	:	:	78	1921	:	:	:	60

very small fraction of its people as soldiers, and whose industries were affected favourably. The percentage increase in the cost of food, fuel and rent there is less than 20 per cent. It is true that the pre-war cost of living there was higher than in Europe, so the effect of the smaller increase is in the direction of equalizing the cost of living ; but as gold mining was adjusted to suit the local costs before the war it has been less curtailed by increased costs than if average world conditions held, without modification, on the Witwatersrand:

Diminishing return from mining.

Returning now to the general principles regulating value, we have to dwell upon the fact that "diminishing returns" hold in mining, to use the technical phrase of the economists ; that is, additional resources spent in extending the industry will, in general, bring in a smaller return than those already in use. The reason for this is that the output of a mineral is limited by the bounty of nature ; the miner naturally uses the more accessible and richer ores, so that an increased demand has to be met from more expensive sources. If there were a systematic survey of the known ore deposits it would be possible to form some opinion as to the rise in value that would accompany a given increase in demand, although, of course, information about ore deposits is necessarily uncertain until they are actually opened up.

Possibility of new discoveries.

This information is not at present available, though some of it is in the possession of the mining

companies. If a scheme for the international regulation of gold output were undertaken such a survey would be one of the tasks of the Commission. There is reason to think that a moderate increase in value would produce a considerable increase in output (in technical language that the elasticity of supply is large); if this is so, it would make it easier to regulate value to the desired level. The supply of gold may, naturally, be increased at any time in a way that cannot be foreseen by the discovery of a new field; all one can say about this is that as the world gets more fully explored, the probability of great new discoveries becomes less. A new find in the way of gold mining happens every month or so, but few of them come to possess any importance, and the difficulties in the way of exploiting deposits in remote places are much greater than the public realizes, so that practical mining developments are but rarely sudden and unforeseen. In fully occupied countries like Western Europe they may be ruled out altogether. There has been no attempt of late years to start gold-mining ventures in Western European countries, but the ridiculous boom in oil-boring which occurred in England during the war, and its total collapse, may serve as a warning. As an example of what happens in new countries one may mention the deposits of gold in the low-lying parts of the Transvaal: these have been known for thirty years past, and are slowly coming to fruition as the difficulties of climate and transport are overcome. They may become important some day, but it will not be a sudden or unexpected occurrence. Revolutionary discoveries like that of

the Witwatersrand must always be highly improbable, though not impossible. On the whole, it seems likely that the world's output of gold will diminish even further than it has, before increasing again ; but it will certainly increase if the monetary policy of the nations is such as to create a renewed demand ; there is plenty of gold to be had, if it is made worth while to dig it up.

Demand for gold.

It becomes necessary, then, to consider the probable demand for gold. This can be put under three headings : in the first place there is the demand for manufacturing purposes ; secondly, there are the wants of oriental countries, especially India, where the gold, though it may be in monetary form, is in practice hoarded and treated as an ornament ; and, thirdly, there is the increase that is required in the actual monetary stock of the commercial nations.¹

For manufacture.

The main industrial demand is for jewellery, and though some of this might be melted down and coined in an emergency, it never is ; so all the gold used in that way must be considered as lost so far as money is concerned. The use of gold grows steadily with the increasing population and wealth of the world, and especially with the growth of

¹ This question was dealt with at length in a previous publication of the author's, *Gold, Prices, and the Witwatersrand* (London : King & Son, 1919), to which reference may be made for more detail than can be given here ; as, however, the figures there given need bringing up to date, some supplementary information is given in the Appendix below (p. 144).

luxurious tastes among the poorer classes, and the present fall in real value of the metal, or in other words the abundance of money, is giving a special fillip to the demand for gold jewellery which has not risen so much as most manufactures and articles of luxury. There was, of course, a great drop in consumption during the war, but the gold-using trades have pretty well recovered from that. Statistics are imperfect, but the United States, the largest consumer, reports having used £m11½ in 1919 and £m11 in 1920, whereas the largest pre-war amount was £m7¾. The consumption of the world has usually been about three and a half times that of the United States ; we may expect it to bear a smaller proportion, in future, owing to the greater relative wealth of the States, but 25 to 30 millions a year does not seem an excessive estimate.

For the Orient.

India regularly imports more gold than it exports, the excess varying according to the prosperity of the country ; there have been one or two exceptional years when there has been a net outflow, because crop failure has put the country temporarily in a difficulty about meeting its engagements, but this has only happened twice in the last thirty or forty years. The Indian people are in fact the best customers of the gold mines ; they devote an appreciable part of their small earnings to buying gold and silver, which though made up into jewellery, is regarded as part of the available resources of a family, to fall back on in time of need. Hence it is that something occasionally comes back out of the

hoard, as in the two years mentioned ; but ordinarily the gold taken by India must be regarded as having passed outside the range of commerce.

The amount of gold taken in this way is important, for though Indian incomes are small, the country is prodigiously populous. There are more than twice as many inhabitants as in Britain, France, and Germany put together, and, as their tastes run to buying gold, it is not surprising that the demand is large. As far back as the middle of last century India sometimes bought £m5 of gold per year, and with the increasing prosperity of late the net imports rose to a maximum of £m25 in 1911. Just now India is going through a period of financial difficulty, a reaction from the war ; but there is no doubt that it will recover in a few years, and then the absorption of gold will again be on a large scale. China, though equally populous, imports but little : Egypt has an appreciable demand for gold, but of course it is on a much smaller scale. Altogether the demands for industry and for export to the Orient may be expected to reach 40 millions a year, when the economic situation of the world is more settled—possibly even more.

Increase in demand for monetary use.

The monetary demand for gold depends essentially on the rate of progress in production and wealth of the world at large. This is a matter of transcendent importance on the material side of history, but it has attracted singularly little attention. Thus Cassel notes¹ that “the normal annual demand for gold

¹ *Op. cit.*, p. 82.

amounted during the period 1850–1910, on an average to about 3 per cent of the total accumulated stock of gold in the world at the time. Of this sum 0·2 per cent covered the loss of gold, and 2·8 per cent was added to the world's stock of gold.” He then assumes that the same percentage will be required in future (though the figure mentioned is not supported by any statistics), and so concludes that in twenty years time the output will need to be on the scale of £m174 per annum in order to meet the demand. Other writers often ignore the matter ; but we cannot arrive at any useful forecast, as a guide to policy, without a much more careful investigation.

Rate of increase in demand. Population.

Increase in the demand for money—assuming the value of money to be constant—arises partly because of the increase in population, partly because the average man has been growing richer. The former cause can be allowed for with some accuracy, the population of the world being known within reasonable limits. The actual increase for the world has been, during the last century, at the rate of about three-quarters of 1 per cent per year ; but this would give an under-estimate of the influence of increase in population on the need for money, because a hundred, or even fifty, years ago much less of the world was included in the circle of commerce than now. At that time Japan had no intercourse with Europe, South America was almost unknown to civilized intercourse : the area over which a fully developed “money economy” functions

has been spreading considerably. Allowing for this and for the fact that the growth of population has been greater in Europe than in the less commercially civilized parts of the world, one has to regard the recent growth of population as at a rate between $1\frac{1}{2}$ and 2 per cent.¹

Growth in individual wealth.

Now the increase in production of wealth in the western world, that we are concerned with, has been from 3 to $3\frac{1}{2}$ per cent, so it is fair to conclude that, in recent decades, growth of population and growth of individual prosperity have each contributed about $1\frac{3}{4}$ per cent to the sum of progress in wealth. Next as to the future: whatever the rate of increase in population, we may, I think, consider ourselves lucky if individual prosperity continues to advance as fast as it has done. There are signs to the contrary; even in the United States, where natural resources were looked upon as unlimited, there is no longer free land in the West to be had, and the industrial struggle becomes acuter. However, individual wealth depends chiefly on the progress of science, and on the education of the average citizen.

As regards numerical increase, more precise forecast is possible. In all civilized countries the birth rate was falling when the great war broke in upon our customary life. Not only has there been a loss of births, together with great destruction of life during the actual course of the war, but large parts of Europe have been left so poor that the discourage-

¹ See Lehfeldt, *Gold, Prices, and the Witwatersrand*, p. 25.

ment to increase in population must be seriously increased. It is not easy to judge by the statistics that are yet to hand, for the abnormal circumstances following the war are not yet over ; but in England, after a temporary rise following the cessation of war, the birth-rate in 1921 was below the lowest pre-war rate. In Germany even the 1920 rate was below the pre-war lowest (1921 figures not available) : in the United States the rate of increase which in the 'seventies had been 3 per cent per annum, in the early years of this century was 2 per cent., and in the decade covering the war $1\frac{1}{2}$ per cent. Altogether it seems unlikely that even in the part of the world occupied by the European races, the increase will exceed $\frac{3}{4}$ per cent.

Indeed it is not reasonable to look for a continuous increase at a certain percentage rate ; growth of population comes when circumstances favour it, and after a while the impulse to growth is exhausted. Mere arithmetic suffices to prove this, for even the low rate of increase just estimated would in a century add more to the number of inhabitants than has been added since the time of the Roman Empire. How long could such an increase last ? We have been biased in our views by the history of the nineteenth century, which was really a most abnormal period. In fact five hundred years of the same "progress" in population would cover the whole earth with people as thickly as London at the present time : except, of course, that they would mostly die of starvation first.

Putting together the increase in population to be expected, and such progress in individual wealth as

may come about through the advance in knowledge and education, despite the fact that there is no longer the chance of opening up vast new natural resources such as were at the disposal of the nineteenth century, we may consider 2 per cent as an optimistic forecast of the rate of increase in wealth. If, then, there is no further modification of the monetary system—if, that is, the proportion of gold backing required for currency remains as at present—an increase of 2 per cent per annum in the monetary stock of gold should serve to keep its value constant.

Total expected demand.

As the stock is at present about £m2,100, that points to a requirement of about 40 millions a year, added to the demands for manufacture and for the Orient, or say 80 millions in all. The output was greater than that until two or three years ago, but it is unlikely to regain that figure for the present. So we may anticipate that the new gold available for increasing stock will be 1 rather than 2 per cent in amount, perhaps even less than 1. There is some improvement taking place on the Witwatersrand, as a result of the settlement of certain labour difficulties. It remains, however, to see whether a permanently satisfactory organization of the industry there will be arrived at, and whether the improvement in the economic position of the mines will be sufficient not only to save some of them from closing, but to tempt new capital, so that the output of the field may be kept up despite the exhaustion of particular mines.

Probable rise in value of gold.

We appear then to be entering upon a period of rise in the value of gold, comparable with the period 1873-96, which was dominated by the falling in productivity of the Californian and Australian fields. The rate of rise in value then averaged some 2 per cent per annum. As we are starting this post-war period with money that has suffered such an extraordinary depreciation, there is abundant room for a rise in value, and it would, in fact, at the rate holding in the last time of gold scarcity, take twenty-five years before the level of value was restored to what it was in 1913.

Suggested management of currency demand.

Of course the monetary system may not be left on the same basis: there may arise a much keener competition for gold among nations trying to restore their currency¹ to a gold standard, or desiring to use gold coins in commerce. But this possibility need not disconcert us. There is more reason to welcome the consequences of such measures than to take steps, such as the "management" of currency with a view to preventing a rise in the value of the standard, just now. If the course of gold is left to spontaneous influences, there will be a long enough interval—at least a decade—before appreciation becomes a danger to be guarded against. This interval would permit of making such international arrangements as have been suggested above.

It certainly does seem likely that sometime the supply of gold will fail to keep pace with the in-

¹ See Genoa Conference Report (p. 143 below).

creasing demands of commerce, and that then either gold must be abandoned as a basis of currency, or that deliberate regulation of the extent to which gold is economized by the use of paper, must be undertaken. But that time has not arrived yet ; such inadequacy as the production of new gold shows being rather to the good at the present crisis. We need go no further, now, than to point out that such regulation remains as a resource, in the background, and that by the time it becomes necessary, the habit of deliberate international action will be better established than at present.

APPENDICES

RECOMMENDATIONS OF THE GENOA CONFERENCE

At the International Conference held at Genoa in April, 1922, the Financial Commission made a series of recommendations, of which the most important that bear on the present subject are as follows :—

The gold standard is the only common standard which all European countries could at present agree to adopt (Clause 5).

Each country must decide on the gold value of its unit, when circumstances permit (Clause 8).

Any country not possessing a central bank should establish such an institution ; all central banks should co-operate (Clause 3).

A convention should be made to centralize and co-ordinate the demand for gold and avoid competitive efforts to secure reserves ; economy to be attained by a system of reserves in the form of mutual foreign balances. An international clearing system to be established (Clause 9).

When progress permits, a free market for gold is to be established in suitable centres : failure to maintain this will entail suspension of the right to hold reserve balances with the central banks of the other participating countries : credit will be regulated, through the central banks, with a view to preventing undue fluctuation in the purchasing power of gold (Clause 10, Sections 2, 5, 7).

It is further recommended that the central banks should organize a futures market in foreign exchange.

(Full text in *The Times*, April 24, 1922.)

STATISTICS OF GOLD (in million pounds)

Year.	World Production. (A)	Net Imports into India. (B)	Production in India. .	Industrial consumption (India excluded). (C)
1911 . .	94·4	+ 25·2	2·3	23·5
1912 . .	97·5	22·7	2·3	25·6 .
1913 . .	95·1	15·6	2·5	25
1914 . .	92·8	5·1	2·3	25 ..
1915 . .	97·2	— 0·7	2·4	19
1916 . .	93·3	+ 8·8	2·3	15
1917 . .	86·2	16·8	2·2	14
1918 . .	78·3	— 3·7	2·1	13
1919 . .	75·0	+ 23·6	2·2	24
1920 . .	69·5	2·1	2·0	29

(A) Transvaal Chamber of Mines Reports.

(B) For financial year ending March 31, following Reports of Controller of the Currency.

(C) U.S. Mint Reports : war years roughly estimated by author.

MONETARY STOCK OF GOLD, EXCLUDING THE ORIENT (in million pounds)

	Stock (at begin- ning of Year).	Output.	Industrial Consump- tion.	Consump- tion in India.	Net. Increase.
			In Quinquennial Periods.		
1911 . .	1532				
1911-15					
1916 . .	1811	477	118	80	279
1916-20 . .					
1921 . .	2060	402	95	58	249

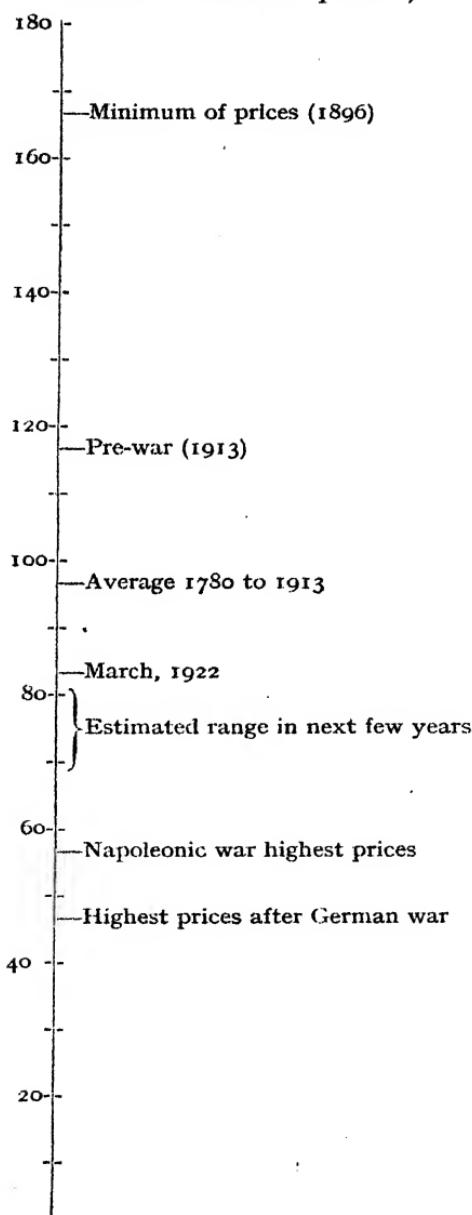
APPENDICES

145

MONETARY STOCK BEFORE AND AFTER THE WAR

CLASS A.	Total Dec., 1912 (U.S. Mint Report)	Paper circulation Mar. 1921 million units.	Ex-change Mar. 1921 per cent of gold.	Actual Value of currency Mar. 1921	Population (millions)	Value per head	All amounts in gold pounds (not depreciated sterling)	Unit.
	£m.			£m.	£			
United States . . .	696	4,764	100	979·0	106	9		Dollar
Canada . . .	50	484	88·8	88·5	9	10		do.
United Kingdom . . .	198	454		364·6	47	8		Pound
South Africa . . .	16	9·3		7·5	7	1		do.
Australia . . .	40	59	80·3	47·4	6	8		do.
New Zealand . . .	5	8		6·4	1·2			do.
India . . .	270	1,662		52·7	87·6†	5‡		Rupee
							‡ In addition to silver and gold.	
							† Including silver and gold.	
Egypt . . .	44	34	80·3	28·1	13	2		Pound
Holland . . .	33	1,072	84·8	75·0	7	11		Florin
Sweden . . .	13	717	87·3	34·5	6	6		Krone
Norway . . .	6	433	60·1	14·3	3	5		do.
Denmark . . .	10	517	65·0	18·5	3	6		do.
Switzerland . . .	18	985	88·3	34·5	4	9		Franc
Spain . . .	81	4,255	72·6	122·5	21	6		do.
Argentina . . .	108	1,363	78·9	91·5	9	10		Paper peso
Uruguay . . .	6	55	86	8·8	1·5	6		Peso
Chile . . .	6	303	70·4	16·0	4			Peso
Brazil . . .	67	1,720	43·7	84·6	31	3		Milreis
Japan . . .	62	1,177	90·5	116·4	56	2		Yen
China . . .	—	—	81·0*	—	320	—		Shanghai tael
							* Cf. with average of 1913	
Total without India and China	1,459			2,138	about 200		in silver.	
Increase over 1912				60%				
CLASS B.								
Belgium . . .	24	6,105	38·2	92·5	8	12		Franc
France . . .	398	38,435	36·5	556·2	41	13		do.
Greece . . .	6	1,603	39·4	25·1	5	5		do.
Italy . . .	93	21,033	19·9	166·0	36	5		do.
Total . . .	521			840	+ about 80		in silver.	
Increase over 1912				70%				
CLASS C.								
Finland . . .	5	1,476	13·74	8·0	3·3	3		Franc
Serbia . . .	3	3,500	14·62	20·2	11	2		do.
Bulgaria . . .	5	3,462	6·68	9·2	5	2		do.
Rumania . . .	20	11,005	7·12	36·1	17	2		do.
Germany . . .	285	79,705	6·72	262·2	61	4		Mark
Poland . . .	—	74,087	0·533	19·3	24	1		do.
Czecho-Slovakia . . .	—	10,922	6·44	29·3	14	2		Crown
Austria . . .	149	41,067	1·224	21·0	6	3		do.
Hungary . . .	—	15,650	1·384	9·0	8	1		do.
Portugal . . .	36	635	10	14·1	6	2		Escudo
Total . . .	503			428				
Estonia . . .								
Latvia . . .								
Lithuania . . .								
Russia . . .								
Turkey . . .				No information.				

DIAGRAM OF THE VALUE OF MONEY
 (Reckoned according to the reciprocal of Sauerbeck's
 index of British prices.)



BY THE SAME AUTHOR

**GOLD, PRICES, AND THE
WITWATERSRAND**

6s.

CONTENTS.—The Gold Supply—The Requirements of Commerce—
Paper Substitutes—Influence of the War—Position of the Witwatersrand
—Appendix : Statistical Tables—Appendix : The Valuation of Mines.

HISTORY OF THE BANK OF ENGLAND

By PROFESSOR A. ANDRÉADES, of the University of Athens. Translated from the French by Christabel Meredith. With a Preface by Professor H. S. Foxwell, M.A. 12s. 6d.

Westminster Gazette.—"An extremely striking book. . . . It deals with the history of the Bank from its birth to recent days in a comprehensive, exhaustive, but at the same time interesting manner, and will well repay the careful study of all people interested in banking matters."

Banker's Magazine.—"This fascinating book should be on the bookshelf of every student."

**PEOPLE'S BANKS : A RECORD OF SOCIAL
AND ECONOMIC SUCCESS**

By HENRY W. WOLFF. Fourth Edition. Newly revised and brought up to date. Giving a history of the Origin and Extension of Co-operative Banking, Statistics, and a description of the different forms in use in various countries. 10s. 6d.

Observer.—"It is impossible, in the space at our disposal, to do justice to Mr. Henry W. Wolff's 'People's Banks.' Mr. Wolff has carefully studied the subject, and writes about it so admirably that his volume should be in the hands of every one interested in the study of methods by which the lot of those who labour may be improved."

ELEMENTS OF STATISTICS

By A. L. BOWLEY, Sc.D., F.S.S., Professor of Statistics in the University of London. Fourth Edition. Revised and considerably extended, 24s. Also in Two Vols., Part I., General Elementary Methods, 16s.; Part II., Applications of Mathematics to Statistics, 12s. 6d.

Bankers' Magazine.—"The new edition is particularly suitable for Actuarial Students."

P. S. KING & SON, LTD.

Orchard House, 2 & 4 Great Smith Street, Westminster.

BOOKS TO READ

AMERICAN BANKING METHODS

By LEONARD LE MARCHANT MINTY, B.Sc. (Econ.) ; .B. Comm. Certificated Associate of the Institute of Bankers. Statistical Plates. 15s.

CONTENTS.—Formation and Organization of Banks and Trust Companies—Receiving Departments—Clearing and Collecting Departments—Paying Departments—Book-keeping Departments—Loans—The Credit Department—Trust Departments: Stock and Bond Trading—The Foreign Exchange Trading Department—The Foreign Tellers' Department—Foreign Discount Department—Commercial Credits Department—Travellers' Letters of Credit and Travellers' Cheques—Organization of Staff—Appendices.

WEALTH AND TAXABLE CAPACITY

By SIR JOSIAH STAMP, K.B.E., D.Sc. Being the Newmarch Lectures of 1920-21 on Current Statistical Problems in Wealth and Industry. Second Edition. 7s. 6d.

In the House of Commons, during the Budget Debate of April, 1922, this book was much referred to.

Times.—"The book deals with National Capital, National Income, Distribution of Income, Capital limits of Taxable Capacity, effect of changing Price Levels upon Profits and Wages and upon the burden of Public Debt . . . full of interesting matter, and is worth the consideration of all interested in economic and social problems."

AN ACADEMIC STUDY OF SOME MONEY MARKET AND OTHER STATISTICS

By E. G. PEAKE, O.B.E., M.A., LL.B. Statistical Charts. 6s.

Yorkshire Observer.—"Has yielded some results which are certainly interesting . . . his conclusions can be statistically and diagrammatically stated and tested, and probably practically applied . . . will well repay study, for it has a practical bearing on a very practical subject, and especially on a phase of that subject of everyday importance."

THE PROBLEM OF THE RUPEE : ITS ORIGIN AND ITS SOLUTION

By B. R. AMBEDKAR. Statistical Charts. 12s. 6d.

CONTENTS.—From a Double Standard to a Silver Standard—The Silver Standard and the Dislocation of its Parity—The Silver Standard and the Evils of its Instability—Towards a Gold Standard—From a Gold Standard to a Gold Exchange Standard—Stability of the Exchange Standard—A Return to the Gold Standard.

CHARTS.—Discount Rates in India—Relative Values and Relative Production of Gold and Silver—Fall of the Rupee Sterling Exchange—Fluctuations of the Rupee Sterling Exchange—Prices and Wages in India and England, 1873-93—Comparative Price Levels, 1893-1922.

P. S. KING & SON, LTD.

Orchard House, 2 & 4 Great Smith Street, Westminster.

